

Seven Kinds of Inflation

Seven Kinds of Inflation

—and What to Do About Them

BY

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*This Book Is Dedicated
with Profound Gratitude
to
E. CARROLL SKINNER
My Research Assistant*

Preface



THERE should be ample excuse for this book in the agonies of fear and physical hardship which recurrent inflations and reactions impose upon millions of our neighbors.

But if I did not have this excuse for an ever-increasing interest in this profoundly human subject, two personal experiences would have provided ample stimulus. The first—that at the crest of the 1919–1920 inflation I was editing the *Foreign Trade Review* of the Guaranty Trust Company of New York and trying to see through the inflationary mists of those days. The second—that at the acute phase of the 1932 crisis I was charged with the responsibility of reviewing and recommending changes in the bond portfolio of one of the large New York savings banks. What both experiences meant in practical urgency is obvious.

Yet the specific excuse for this book is something different—not the anxieties caused by real crises, but the senseless turmoil imposed on all of us by “inflation scares” when there is no inflation!

PREFACE

The purpose of this book—written under the competing pressure of daily professional work on investment problems—is to help the layman to defend himself, and his own judgment, against this verbal assault and battery of the calamity howlers in one year and of the fatuous optimists in another. The layman should be able to determine the truth for himself.

It is my experience that a daily newspaper and a little simple arithmetic are all he needs for this purpose. He can then forget the terrifying ghosts paraded before him by politicians, financial gossipers, university theorists, and far too many well-intentioned bankers.

I am indebted to so many people for sundry ideas expressed in this book (as in the case of Joseph M. Boyd, of the Harvard class of 1935 for his analysis of money as a “debt that must be spent”) that I cannot even attempt a list. I do wish, however, to express my gratitude to my immediate business associates, John Pell and Ira Kip, Jr., for their constant encouragement in my studies of money and inflation, and to E. Carroll Skinner who, as my research assistant, has made many brilliant and practical discoveries of relationships between banking figures and various price movements.

Nor can I forget my moral debt to those “good companions” of frequent lunch-table discussions who have helped my flagging wits over many an economic puzzle—among them Alexander Sachs, Robert Warren, Bill Cumberland, Ralph Robey, Ragner Naess, Sherwin Badger, and Donald Wood-

PREFACE

ward. Heaven knows they are not responsible for my views! But they have helped me greatly in sharpening up what views I had.

This book, however, is not written for those experts, but for the sorely puzzled layman, and for those investors, bank officials, politicians, businessmen, and job holders who know from recent hard experience just how large a stake they have in the truth about inflation and deflation. Only the last chapter is addressed alike to my economist friends and to all the others as an urgent plea for a new kind of realistic inquiry into our future.

RICHARD DANA SKINNER.

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April 21, 1937.

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Seven Kinds of Inflation

CHAPTER I

From Names to Things



WRITING in the *Atlantic Monthly* in July, 1936, I said that "the unhappy layman, the lowest person in the financial hierarchy, has every right to howl his distress at the moon. The professors and economists, many of the bankers, and most of the brokers' customers' men have scared the wits out of him. They have told him more things in three short years about the humble dollars in his pocket than could possibly be true at one and the same time about any object under the sun."

These remarks still hold true—also the ones that followed: "They have told him his dollars were being inflated, that inflated dollars would lead to his financial ruin, that inflated dollars would drive down the value of bonds held by his insurance company or his savings bank until his life's savings would shrivel before his very eyes. They have hung before his miserable gaze not only French assignats, but also post-war German marks, post-war French francs, pictures of Mississippi Bubbles and horrible

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flapping things called greenbacks. As he groaned responsively, they have piled horror upon horror.

"But they have also confided to him that he must receive smaller dividends from his insurance policies and lower dividends from his savings bank and a lower return on his bond investments because 'easy money' was raising bond prices and lowering the interest rate! Something has obviously gone wrong with inflation. It seems to be working upside down. The frightened layman sold his bonds before they were scheduled to drop through the subcellar. Now he can hardly find them in the stratosphere. He rushed to convert his dollars into shoes before they rose to \$25 a pair—but shoe prices are still clinging to the sidewalks. Yes—he has every right to howl!"

The rest of the article then suggested a few simple reasons why so many of the economic crystal-gazers had failed to be of any help to the layman. It admitted readily enough that inflation might still come about, and concluded with these words: "But unhappily for the puzzled layman, many of his professors and bankers and customers' men will then call it, not inflation, but 'widespread business recovery.' In the end, the poor layman will still be howling his distress at the moon!"

It is superlatively obvious that what the layman wants to know—what he *must* know if he is to conduct his business or his investments or his daily family affairs with any reasonable intelligence and soundness—are these points:

First: Are we having *any* type of inflation?

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Second: If so, just what type is it? For example, what group of prices will it raise—stock prices, bond prices, or the general cost of living? Or will it depress the standard of living by some other method than an actual raising of prices?

Third: How can he detect and measure the extent and course of this inflation while it is actually going on so as to steer his own course of action accordingly? What published figures must he look for, and how can he use them as measuring sticks?

Unfortunately, there has been so much fuzzy thinking and writing about inflation that the layman is hardly aware of the primary fact that there actually are several different types of inflation. He thinks of inflation as one single green-eyed monster spouting ruination. Inflation *always*—so he thinks—chokes down bond prices, always shoots stock prices to dizzy heights, and always raises commodity prices and the cost of living much faster than any increase in his dollar income or wages, thus reducing all but a few lucky speculators to rank misery. Conversely, he thinks that “deflation” helps bond prices and hurts all other prices.

To freshen the air on this first and primary point, suppose we glance over recent history. If “inflation” *always* injures bond prices, how do we explain that best grade 4 per cent bonds were still selling in the “inflated” period of 1928 at par but dropped to only 76 cents on the dollar in the supposedly “deflated” days of 1932?

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Again—if we believe, as so many have told us, that we were “deflated” in 1932 and grossly “inflated” by 1936—how does it happen that best grade bonds jumped back during this very “inflation” period from 76 cents on the dollar to 120 cents on the dollar? In 1932, one of the best secured railroad bonds in this or any other country, namely, Norfolk & Western Consolidated 4’s of 1996, actually sold as low as 76. In 1936 it had risen to over 120. Is it possible that we were actually more “inflated” in 1932 than in 1936—in spite of all the clamor and fuss? Or is there, perhaps, a special type of inflation that does raise bond prices, and another and separate type that lowers them?

Once more, what of the supposed “inflation” of 1926 to 1929, when common stocks were trying to reach the sun? Best grade bond prices rose steadily during the first two of these four years, and never sank to anything approaching a panic level even at the stock market peak of 1929. But the strangest phenomenon of all was the fact that commodity prices never rose at all during the entire four-year period. Nor was there anything remotely resembling a currency inflation. Many of our financial pundits at the time pointed to these two facts as proof positive that we could not possibly be inflated. Yet we were inflated. The trouble was that the conditions happened to be different from those of the previous inflation of 1920. In short, we were in another “type” of inflation.

But instead of admitting this, what is the popular superstition? Usually, to take refuge in “psychol-

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ogy"—to say that inflation, in any type, or in contradictory types, is nothing but a mysterious lack of confidence in this or that. If this kind of "psychological" explanation makes sense, then it is high time to place astrologers in charge of all business and all government.

No; the layman instinctively wants explanations that explain, reasons that have at least the clean odor of facts and common sense. Once he recognizes that there are several distinct types of inflation, or combinations of types, he wants to know the why and the wherefore. He wants to know how the symptoms of these differing types of inflation could have been recognized and at least roughly measured while the inflations were gathering momentum. To take a specific instance, he might note that rising bond prices in late 1920 and during 1921 actually heralded the emergence from the 1921 depression, whereas rising bond prices from October, 1929, to June, 1931, instead of heralding prosperity around the very next corner, simply preceded the final catastrophe of late 1931 and early 1932. Was there any measurable warning of this difference of conditions in figures and facts available at the time?

This book does not set out to be a discussion of fine-spun economic theories. It is no attempt to discover ultimate causes of the business cycle. It is merely an honest effort to put into plain, everyday terms a few practical ways of detecting and measuring different types of inflation and deflation while we are in the midst of them.

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The measures discussed—the facts and figures we can use in making a common-sense appraisal of current conditions—have not been born in a vacuum. They have been used, and are still being used, in rigidly practical investment work and in arriving at decisions and policies affecting very large investment totals, not only for individuals but for banks and institutions. Economic theorizing has its proper and important place. Toward the end of this book, I have taken the liberty of indulging in just such theorizing in connection with the causes of inflation to be found in the constant conflict between property owners and financial creditors. It is hard to resist, in any discussion of inflation, some such treatment as this of the broader question of why we should tolerate inflation and deflation at all. But that discussion is purely a by-product of the main objective of the book—a practical method of judging just where we stand at any given time in the ever-moving tides of inflation and deflation.

Those who want a periscope to glimpse over the horizon of the future will find little satisfaction in the detection and measuring methods discussed in the following pages. They are not “forecasting” devices, in spite of the fact that a major change in the price level of stocks, bonds, or living costs—as the case may be—is often preceded by warning signals in measurable facts. I have known instances, for example, when a definite inflation, or increase in the total money supply available for investment, has shown up clearly in the published banking figures a month or two in advance of a recovery in bond

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prices. But that has about the same relation to "forecasting" in the usual sense as have the dark clouds overhead just before a rainstorm. The weather prophet who waited until those heavy clouds were visible to "forecast" rain would have little honor in his own or any other country! The most that can be said for the inflation measuring methods discussed in this book is that they correspond to barometer and temperature readings and a glance at the sky before setting out on a picnic. They present facts on which common-sense conclusions can be based.

Nor does this ready admission minimize in the slightest the vast importance of arming ourselves with just such measured facts. As I pointed out in the quotations from the *Atlantic Monthly* article, the layman has suffered unbelievably—not only materially but mentally as well, in hours and days of needless anxiety and fear—from a constant distortion of the plainest and most visible of facts. In the inflation scare of 1934, the layman was not the only victim. Several of the country's largest banks were so convinced that inflation (meaning a bad time for bonds) was just around the classic corner that they placed huge proportions of their own funds in nothing but the shortest-term bonds at very low income yields. They thereby lost millions annually in income, and tens of millions in increased market value of long-term bonds in the subsequent bond "bull market" of 1934 and 1935. Other large banks were wiser, and received the double advantage of high income and later market appreciation from

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longer term bonds. But when the experts were in this sort of dramatic disagreement, what was the layman to do? What were the directors of smaller banks to do?

Yet during all this period a simple measure of facts,¹ drawn from the published weekly banking figures in the newspapers, showed that a tidal wave of increased investment funds was upon us—showed clearly that whatever kind of inflation we were having, it was certainly not of the type to depress high-grade bond prices. This phenomenon, and certain horse-sense ways of measuring it at the time it was going on, are discussed in Chapters IV and V on Bond Price Inflation. The point is that these measures were actually applied at the time and made the basis for recommendations to retain existing long-term bondholdings and to add to such holdings. Did this necessitate “forecasting” or financial crystal gazing? Certainly not. It meant nothing more than accepting current facts and figures as showing that for the time being there was no inflation of a type that could do anything but support or raise bond prices.

In other words, the measures described in this book are not intended to answer the question “Where do we go from here?” but only the very important question “Where are we *now*?” After all, it may be most important to us to know that we are *not* living in an inflationary period of a given type when four-fifths of our friends insist that we are. And it may be equally imperative for us to know

¹ See page 60.

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that we actually *are* living through a given type of inflation when the same four-fifths of our friends insist that it is "only normal prosperity" or a miraculous New Era.

If an intelligent man feels hot or feverish, but can't be sure whether it is due to the room temperature or to his own condition, he puts a clinical thermometer into his mouth and settles the question at once. If he has a fever, he probably goes to bed. If he has no fever, he opens the windows and airs out the hot room. If he has a fever, and finds it is still higher two hours later, he knows that his condition is getting worse and probably needs a doctor. Nor does he have to be an inspired "forecaster" to know that today's rising fever may easily go still higher tomorrow. Past experience plus present facts give him a common-sense guide. Today's facts cannot foretell tomorrow's facts, but they can certainly improve our guesswork about tomorrow.

Those who were persuaded or beguiled or cajoled into selling their long-term high-grade bonds in early 1934 know full well what the knowledge of a few homely facts might have saved them. And so, too, those who were bludgeoned into exchanging their bonds for common stocks in the same period know just what the succeeding long months of declining stock prices involved for their nervous systems. The bonds they had sold went up; the stocks they had bought on "inflation" hopes went down. Yet the facts to measure the true conditions were right there, available in every important newspaper of the land. We were *deflating* in those combined

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factors which affect stock prices and *inflating* in the factors which would raise bond prices.

As to those who bought "commodities" as an inflation "hedge," they soon discovered what the banking figures alone would have told them, that the forces then at work could produce only the

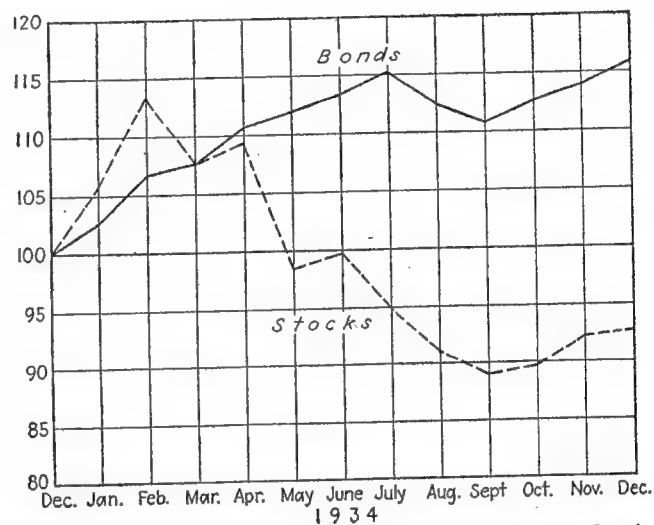


CHART 1.—The rising high-grade bond prices and falling stock prices of 1934—using December, 1933, prices as 100.

mildest kind of rise, if any, in the prices of any commodities in which there was not an acute physical shortage. We were simply not inflating—in the ordinary, horrific implication of the word—and the facts and figures were there to prove it.

In my discussion later on of seven major types of inflation, some of my economist friends and a good

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many business and banking friends may discover overhastily that I am using the word "inflation" in several unorthodox senses. I shall try to avoid this misunderstanding by resorting to the almost extinct art of defining words in advance, that is, saying just what I mean by this or that type of "inflation." I am sure the layman who must plan his business, or his investments, or his choice of a job, or his methods of selling or working, on a basis of hard facts will be far more interested in "things" than in the customary and confusing "names for things." We have had quite enough scares over the last few years as a result of name calling. The time has come to look for the reality behind the name. That is the sole purpose of this book—to provide the layman in finance and economics with a means of separating realities from names, and from slogans and high blood pressure emotions.

To illustrate my point—it would probably horrify many robust conservatives to hear public free compulsory education and the services of the post office called by the name "socialistic." Yet in the sense that they are both social enterprises, owned and operated by government, and subsidized by public funds, they are most inescapably "socialistic." It simply happens that very few people have persistently and loudly called them by that name for many long years. The same idea applies to many literal and exact cases of inflation. As I shall show from figures later on, the year 1932 was, in at least two or three aspects, the most dangerously "inflated" year of this century to date! It was these

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special forms of inflation, quite as much as shattered panic nerves, that logically brought the low stock and bond prices and the tragic unemployment of that year. Yet, because no one has "persistently and loudly" called those conditions by the name of inflation for many long years, the facts are apt to shock many conservatives quite as much as the "socialistic" fact involved in public free education.

In other words, facts, figures, and realities disclose the simple truth that we cannot protect ourselves in our daily lives and business pursuits unless we are ready, mentally, to think of "inflations" rather than "inflation," to think of any given form of inflation in terms of just what it inflates, instead of in terms of some general vague monstrosity. We must even be ready to accept certain forms of price inflation as being desirable—just as the staunchest conservative accepts the compulsory, regimented, and "socialistic" public school system—and to reject others as distinctly harmful. The measure of the "good" or the "bad" in any given form of inflation—like the measure of the fact of the particular inflation itself—must be first of all a keen sense of realities. Added to this we need a healthy desire for the long run good. Every form of price inflation injures someone; so does every form of deflation. That is one of the penalties of the general debt (or "credit") system under which we live. But in many instances there is a broader good or evil to be offset against the specific injury or benefit.

Moreover, there are periods of reasonable equilibrium in which no great harm is done to any group.

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That sort of equilibrium ought to be our general objective as active and intelligent citizens.

The general arrangement of the book follows this plan: first, a defining of the seven types of inflation to be examined; second, a general description of measuring tools to be used by the layman; third, a discussion of the history and meaning of each type of inflation, followed immediately by a chapter, or section, on concrete and simple ways of measuring this particular type. This permits the reader who has little taste for arithmetic (no "higher mathematics" are even mentioned!) to skip quickly over the more technical chapters and to center his interest on those dealing chiefly with broad ideas and facts. The four concluding chapters, for example, may be read by themselves for their general importance to the "state of the Nation" and to the kind of inflationary "system" in which we attempt to live and work.

If this book helps the nontechnical citizen in any way to measure for himself the realities of our situation from month to month and year to year, and so to take a more effective part in directing our efforts toward sane and balanced national values, then the slight energy spent in writing it, and the many years spent in trying to make facts and figures tell an understandable story, will have been most thankfully spent.

CHAPTER II

The Types of Inflation



WE might as well clear the ground at the outset by saying that nearly everyone recognizes a general "upward" inflation once it is in full swing. Thus, whenever the cost of living rises we know that we are in the midst of a specific price inflation. But inflations can be either *absolute*—like a price rise—or *relative*—like a rise in living costs *compared with income*. A *relative* inflation of this sort may even occur *in times of falling prices*.

The years 1919 and 1920 were years of *both* relative and absolute inflation in this sense. A scarcity of housing accommodation, owing to the restriction of housebuilding during the war, shot rentals skyward. Food costs were high, too, and the costs of clothing were exorbitant. Thus nearly every major item in the average man's budget conspired to make a total high cost of living. Wages had risen—but not as rapidly as living costs. Dividends from stocks had risen. But interest payments on bonds had, of course, remained at a fixed dollar amount.

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Those who had retired to live on annuities or on savings invested in bonds suffered acutely. Roughly speaking, each dollar of 1920 income would buy only 70 per cent of the living values it bought in 1917. The whole country was moaning about the high cost of living. Some groups, of course, were specially favored—those who were making huge speculative profits. But by and large the country suffered. In spite of being on the gold redemption standard during this entire period, America was undoubtedly in the grip of a general inflation, and everyone knew it. The monthly rent and grocery and meat bills, compared with wages and income, were the only measuring sticks needed.

But general *upward* inflations of this sort are comparatively rare. In America we have had only two of major importance in the last seventy-five years, the first coming right after the Civil War and the second right after the World War. In the other periods our “upward” inflations have been of specialized types. The reactions from them have often resulted in panics and “hard times.” But they failed in one way or another to achieve the unmistakable character of general upward inflation. People living through them were apt to think of these special inflations merely as business booms. They were more damaging in their after-effects than in their current effects.

It takes only a quick backward glance for most of us to see that the special inflation of 1926 to 1929 misled 90 per cent of the population into thinking we were merely enjoying a New Era of limitless

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prosperity. The cost of living did not rise appreciably. In fact, house and apartment rents declined and quantity production methods brought down the prices of a great many important items, conspicuously of automobiles. It seemed to many that the magic moment in economic history had arrived when we might expect a constantly improved standard of living—which is the polar opposite of a general upward inflation. Presidents and presidential candidates saw the ultimate abolition of poverty just beyond the horizon. The famous chicken boiled in every pot, radios blared in every parlor, bedroom, and bath, and single-car garages were rapidly going as much out of fashion as single bathroom apartments. Here and there one could detect weak spots. Income was unevenly distributed. Certain industries, like textiles, were having a hard time, and farmers were steadily losing ground in their ability to buy industrial products. But these warnings had nothing to do with inflation as we had known it in 1920—so everyone clamored for full steam ahead. Yet we were actually having a special and disastrous type of inflation, subtle beyond the ken of a Yankee President who intimated that “brokers’ loans are not too high” and dangerous beyond the imagination of his immediate successor. The catastrophic reaction proved the point—but only after the event, and when it was too late.

Curiously enough, in the cruel years from 1929 to 1932, instead of deflating in the full and complete sense of that word, we entered another and equally subtle type of special “downward” inflation. It

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put fifteen million able-bodied workers on the bread line. Living costs dropped for those favored with steady incomes—but for the country as a whole living costs dropped much less rapidly than total income, with the result that for the people as a whole the standard of living was even more curtailed than in the inflation of 1920. In other words, we had a “relative inflation,” a rise in living costs compared with incomes and wages. So far as the average citizen was concerned, the results were quite as disastrous as those from any popularly recognized form of general *upward* inflation.

Moreover, as I shall try to show later on, we were having a special type of inflation that could have been measured from published facts and figures, as well as from bread lines and bankruptcies. One familiar symptom of it was the panic level of bond prices in the first half of 1932—not merely of bonds that had become “bad credit risks” because of impaired earnings, but also of bonds of unimpaired credit and unquestioned worth.

By 1936—contrary to most popular opinion—we had more nearly achieved a *trend* of general deflation than at any time since the World War. Income from all sources was gaining on living costs. The value of all tangible property was gaining on total debt. The standard of living was rising accordingly. Yet even in the four years from 1932 to 1936 there was one special type of inflation at work—the kind that inflates the market value of bonds. The bond market of 1936 was almost a replica of the stock market of 1928 and 1929. Moreover, with

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constant reductions being made in bond interest rates (through refundings of so-called "callable" bonds) and in dividends from savings banks and insurance companies, anyone depending for an income on bond investments or dividends from savings banks was compelled to lower his or her standard of living. The man who had distributed \$50,000 among several savings banks formerly received an income of 4 per cent or \$2,000 a year. In 1936 this income had been reduced to 2 per cent, or only \$1,000 a year. For this particular group, then, the special type of inflation of 1936 meant acute distress.

My purpose in reviewing briefly these contrasting periods is to emphasize in the strongest possible terms the need of studying and of being able to measure not only that rare phenomenon, a "general upward inflation," but, even more, the several types of special inflation which accompany nearly every fluctuation in business. As long as we live under a private ownership system complicated by debt (or "credit," if you prefer a more engaging word) there will be a constant series of tides of special inflations, each producing harmful effects on special groups in the community.

If we could have private ownership without organized debt,¹ matters might be very different. But the hard fact is that we are living in a debt world, and that as long as we maintain this debt system we shall have alternating forms of inflation to contend with. Every so often we shall be engulfed

¹ See Chapter XIV.

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by several forms at once and go through a true "general" inflation. But for the year-in and year-out management of our affairs, it is the special types we should study with the greatest care. The job seeker, looking for stability, should avoid jobs in those industries or occupations which are prosperous only because of the special current type of inflation. The investor should be willing to change the emphasis on various types of investments according to the special type of inflation in progress. The man running a particular type of business should know when to expand with confidence, because some particular inflation tide is favoring him, or when to contract in anticipation of a reaction.

This leads us directly to the concrete matter of defining the special types of inflation. Later on we shall look into the ways and means by which the layman can measure them. But the first task is one of common-sense definition and grouping.

The most natural method seems to be this: to consider the special and "absolute" inflation types from the point of view of the thing they inflate. We have just seen, for example, that bond prices were gradually inflated from their low estate in 1932 to their rather dizzy height in 1936. Something was at work to produce this price inflation. What was it? Perhaps several forces were at work. What were they?

At other periods—such as 1917 to 1920, and 1924 to 1929—special forces were at work to raise or inflate short-term interest rates, forces somewhat different from those affecting bond prices. What were they?

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Similarly, we know that the special inflation of 1926 to 1929 brought an enormous rise in common stock prices, leaving living costs and commodity prices relatively stable. What were the forces at work which thus singled out common stocks for inflationary effect? Common stocks, of course, merely represent ownership of land, factories, and going businesses. On the average, it took two and a quarter times as many dollars to purchase the going businesses of the country in 1929 as in 1926. In most cases the individual owner of a business, whose stock was not listed on any exchange, experienced a similar rise in the appraisal value of his business. That is, he could have sold out his business to another individual in 1929 for two to three times as much as in 1926. Thus the whole matter was much broader than the stock market. That particular inflation was a boost in the dollar value of businesses owned. What brought it about?

Then, as a fourth special inflation group, we have the forces that directly stimulate the price of items entering into the cost of living. What were the special inflationary forces at work, in such periods as 1917 to 1920, which made general prices rise?

Here, then, we have four distinct groups of "absolute" inflationary forces:

First, those that increase the market value of creditor obligations—bonds and notes.

Second, those that raise short-term interest rates.

Third, those that increase the market value of ownership claims—common stocks and titles to land or private businesses.

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Fourth, those that raise general prices and living costs.

At times two or more of these groups are working at the same instant. At other times there may be a deflation going on in one group, a flat trend in another, and an inflationary trend in the others. The combinations, in the light of history, have almost infinite variety. But they can, I believe, be reduced to sufficiently simple terms to make it possible to measure them with definite yardsticks accessible to everyone.

In other words, it is possible at any given time to take soundings and to report whether or not forces are at work to raise bond prices or short-term interest rates, stock prices or living costs, or any two or three in combination. As I shall explain in detail later on, the year 1935, for example, combined forces that would normally raise bond prices with other forces that would normally raise stock prices, but did not show forces likely to raise living costs with any violence. It was a combination superlatively calculated to inspire confidence and returning hope—regardless of whether or not one approved, for the long run, all the methods applied to bring about this result.

Aside from these "absolute" types of inflation, we have the still more important types (humanly speaking) of relative inflations. In this book, I am discussing only three:

First, a growth in total debt compared with wealth.

Second, a growth in interest charges compared with income.

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Third, and most important of all, a growth in living costs compared with income.

All three, of course, are interrelated. Thus we have, in all, seven kinds of inflation to examine—four absolute and three relative—and the common-sense ways of measuring or appraising their extent and trend. They should provide the layman with strong defenses against perpetual “calamity howlers!”

CHAPTER III

Concerning Measuring Tools and Methods



IN speaking of measuring sticks for the various forms of inflation, a few more words of advance explanation are demanded. It is in this very practical matter of measurement that the layman has been pestered by the greatest amount of fuzzy thinking. What is the nature of the yardsticks we can use to get practical results?

As to the actual figures to be used, and their sources, I have established to my own satisfaction, at least, and after a long process of trial and error, that no sets of figures are more significant, nor more easily available to the layman, than the series of weekly reports issued by the Federal Reserve Board in Washington covering banking figures for the country. They are published in most of the leading newspapers.

Three main reports of this character are published weekly. The first is the report of the member banks of the Federal Reserve System in 101 leading cities.

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This by no means includes all the banks of the country, nor even the total of banks with membership in the Reserve System. But it is a highly representative cross section, and a very influential section, of the country's banks. This report is issued every Monday from Washington and is published in the Tuesday morning newspapers every week. It gives in detail the condition of these banks as of the close of business the preceding Wednesday. Thus the delay between Wednesday evening's facts and Tuesday morning's information on those facts is very slight. As to why these reports are so revealing of general conditions, I shall have a great deal more to say later on.

The second major report (issued on Saturday and published in the Sunday papers) gives the total value of checks drawn (or "debits") against deposit accounts during the week ending the preceding Wednesday evening. It covers an ever-increasing number of cities, but includes, as a continuing series since 1919, the total for 141 leading cities. These "bank debits" give us the rate at which bank depositors are spending their available funds every week. In this way we can compare the spending activity from week to week, from month to month, or from year to year. In 1929, for example, depositors in these 141 cities were spending at the rate of nearly \$18 billion a week. In 1932 the weekly spending rate had dropped to about \$6 billion!

The third major report (issued on Thursday and published in the Friday papers) covers the condition of each of the twelve Federal Reserve banks, and

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of the twelve banks combined, and also gives important related facts, such as the monetary gold stock of the entire country and the total of currency in actual circulation. Like the other two reports, this one also gives the state of affairs as of the preceding Wednesday evening.

Thus, starting with Friday each week, and ending Tuesday morning of the following week, we have full information on the major banks of the country, on the spending (or "debit") activity of a large cross section of the people, and on the operations of the Federal Reserve System, all as of the same date—namely, closing time Wednesday. By the morning of Nov. 10, 1936 (a Tuesday), we knew all these facts as of the close of business on Wednesday, Nov. 4.

But what of it? Is there any special reason, except during a bank panic, why the average citizen should be interested in these apparently involved and technical reports about banks? Isn't the "psychology" of the people at large much more important? Don't the earnings reports of the large corporations tell a much more practical and vital story? Unless we believe that money controls everything, why should the layman have more than a passing acquaintance with the intricate doings of Federal Reserve and member banks? Or are the banks supposed to be "the villains in the piece," as several lamented agitators of the depression maintained?

In general, the answer to all these questions may be quite emphatic. The banks of the country are

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the most intimate and accurate registers we have of the economic condition of the American people themselves, of the "psychology" of the people, of the probable trend of business (to appear months later in corporation reports), of the actions of men with their money rather than of money upon men. And far from being the "villains of the piece" (granting that the banks are only a part of our much wider "debt system"), the banks are quite as often the victims of what people do with their money as the controllers of popular destiny. They do what they have to do under our present debt system. Their officers make the same mistakes as other investors and lenders of money, and have a somewhat larger responsibility in case their mistakes are serious.

Admittedly, the layman in ordinary times has no very keen interest in the "condition statement" of our banks as far as that statement concerns the banks themselves. *But every major bank "asset" represents a public liability.* Every bond held in the investment portfolio of a bank is "owed" by someone or some group to that bank—perhaps by the United States government, on behalf of all the people, or by a state or city government, on behalf of all its people, or by a railroad or public utility or by some industrial concern. Every note held by the bank represents what some merchant or corporation or individual owes that bank, payable perhaps on demand or perhaps in three or six months. The note may be secured by Stock Exchange "collateral," or by a mortgage on a home

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or a farm, or it may be secured only by the good faith and high standing of the particular borrower. But it still represents a debt, and all these debts put together represent liabilities of the general public, and show us whether or not the public is increasing or decreasing its debts at the banks.

In similar fashion, *the banks' major "liability"—their total of deposits—represents an asset of the general public.* The banks as a group owe to all their depositors as a group the entire total of their deposits. The depositors are the banks' own creditors. Thus banking figures take on a fresh and alluring aspect *when we "invert" or turn them "upside down,"* so to speak, and read them as the story of what the American public is doing—the story of what the public owes as against what it owns, of what it spends as against what it accumulates in the banks, of how much cash currency it uses in daily business as against the amount of checks used, of how much gold metal stands back of currency money and bank deposit money at any given time.

One might ask, of course, how the banks could tell the story of the millions of people who have no bank deposit accounts. But the answer is quite simple, and wholly obvious on second thought. Let us take the case of a man on "relief." On a certain day each week he receives a "relief check." The amount of that check is included in the weekly "debits" report. That is the first way the "reliever" figures in the banking story. Then he cashes his check at some bank, receiving currency and small change. That transaction appears in the total of

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currency in circulation for the week. After that he pays for meat and groceries at a corner store and puts a quarter in the gas meter to get gas for cooking. The corner store deposits the money received in its own bank, and the gas company does the same. Thus from the time the government draws the relief check on its own deposit account at some bank up to the time the "reliever" spends his last nickel for the week, what he does, in accepting and spending, appears faithfully in the aggregate banking story for that week.

Moreover, *any change in the amount of money* that the public is using to conduct its business shows up instantly in these bank reports. This is so important—as we shall see later on—that it deserves a special illustration.

Suppose a man has \$500,000 on deposit in his bank and he decides to use this to build a factory. He plans the factory to cost \$450,000, but before it is finished he finds that it will require his entire \$500,000. He pays his contractors' and architect's and machinery supply house bills with checks on his bank. When that is done, his deposits are exhausted—but the money has not disappeared. It has merely been transferred to the deposit accounts of the contractors and architect and supply houses. *Therefore, the total amount of money in use has not changed.*

But the factory owner now finds himself in need of working cash capital in order to start his factory going. He gives a mortgage to his bank for \$200,000 on his completed factory. That gives him a new deposit credit at his bank of just \$200,000. Where

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did this new money come from? Certainly not from the other depositors of the bank—because the bank's obligations to them remain unchanged. *Their deposits are not reduced* by the amount loaned to the factory owner. No; the new money is simply an additional debt owed by the bank to the factory owner, given in exchange for his mortgage debt to the bank. An exact total of \$200,000 of *new* bank deposit money has been created by the transaction. Put another way, the total money supply of the country has been increased by \$200,000. But what happens when the factory owner begins to draw checks on this new deposit? Does the new money disappear as fast as he draws down on his bank balance? Certainly not. It is simply transferred to the deposit accounts of factory workers, raw material furnishers, and others.

The "new" money does not disappear until the day when the factory owner decides to pay off his mortgage. On that day, let us say, he has \$250,000 on deposit, having made and "banked" certain profits on his operations. He tells the bank to "charge his deposit account" with the \$200,000 necessary to pay off the mortgage. Does the bank receive the money? No. The bank simply *ceases to owe* this man, on its deposit books, \$250,000, and instead simply owes him \$50,000. It also cancels his mortgage debt to the bank. The \$200,000 of "new" money created by the original mortgage loan has now disappeared. It has been canceled out—and the total money supply of the country drops back again by the amount of \$200,000.

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A clear understanding of this method by which deposit money is increased or curtailed is imperative to any efforts to measure various kinds of inflation. Loans by banks increase the total deposit money of the country, whereas loans by individuals or corporations do not. If our factory owner had borrowed the \$200,000 from a friend, that friend's bank deposits would have declined by \$200,000 and the factory owner's deposit would have increased by exactly the same amount, *making no change in the aggregate of all bank deposits*. There would simply have been a transfer of deposits from one person to another. Thus, when we study the weekly aggregate banking reports, and see that bank loans have increased and deposit money has increased by the same amount, we know just what change there has been in the total money in use by the public as a whole, and why. No private loans or transactions would make any change in that total. The entire change, if any, is due to the "creation" of deposit money by the making of loans at the commercial banks.

In the large sense, of course, we must include investments by the banks (mostly in bonds) as "loans." When a bank buys an outstanding railroad or government bond, for example, the total money supply is increased in exactly the same fashion as if the bank had made a fresh loan to an individual—because the bank "pays" for the bond by giving its former owner a new deposit credit equal to the value of the bond. The bank raises its debts to depositors by that amount, accepting in exchange the bonded

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debt of the railroad or government. Whenever the railroad or government pays off that bond now owned by the bank, the "new" money created by its purchase disappears, exactly as when an individual loan is paid off. The essential difference between a bank loan and a bank investment is this—that a loan means a dollar of *new debt* for every dollar of new money created, whereas an investment in a bond already outstanding creates new money without adding to the existing total of debt.

Thus the story told by the weekly banking figures not only reflects most of the economic transactions of the entire country, of people with bank accounts as well as of those with no bank accounts, but also *reveals any change in the quantity of money* being used to carry on the country's business, and whether that change is due to bank loans or investments, or, perhaps, to money coming in from abroad.

Because of the great detail of these banking reports, and their subdivision into all types of deposits and loans and investments, we can tell from the various combinations of figures just what are the great changes taking place in our economic life. We can tell when a shortage of money is developing compared with the current volume and rate of business transactions. We can tell when the country as a whole is going into debt or out of debt compared with its total money supply. We can tell how rapidly money is passing from hand to hand as an indication of the rate of business activity.

Of all the tools for measuring the forces at work to inflate this or that group of prices—of bonds, of

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stocks, or of general cost of living—nothing is comparable with the weekly bank reports described above. Yet the study of them in simple common-sense terms, for the purpose of revealing these particular facts, is almost a new science.

It has been said that the sewing machine was made possible by the simple act of placing the eye of a needle near the point instead of at the opposite end. Yet until that “turning upside down” of the needle was actually made, few people, if any, ever thought of the possibility. Something of this same idea applies to the turning upside down of the banking figures, to make them tell the story of a people. As we have used them for many decades, they merely tell the condition of the banks themselves. But *inverted* they tell of the condition, the activity, the sound or false hopes, the confidence or the fear, of an entire nation. They do not tell the detail of the millions of daily transactions between people; but they do tell of the final or net result of those transactions as it affects the people as a whole. Above all, they tell the “inside” story, so to speak, of the course of various kinds of inflation and deflation as they affect the intimate lives of millions.

There are, of course, other measuring tools besides the weekly bank reports. But most of them, like the excellent studies and estimates of the National Industrial Conference Board on costs of government, costs of living, national income, and private debt, appear rather too long after the events to make them of great current value. They are helpful chiefly in attempts to gain a long perspective of the years, or

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as scientific estimates of many factors on which we still have little current information. Many such reports and estimates are mentioned or used in the following chapters, but only where a long backward look seems worth while. For current, up-to-the-minute appraisals of what is going on, and for appraisals which any layman can make for himself from week to week or month to month, the banking figures must remain the unexcelled tools for practical measurement.

As to measuring "methods," we have what is called an "index." The name alone seems to frighten many people—but for no good reason. Most of us, whether we know it or not, think in index terms. The housewife who says that a loaf of bread costs a cent more this year than last is perilously close to talking in index terms. That is, she is comparing a price of today with a price of yesterday. If, instead of saying that bread is now eleven cents compared with ten cents last year, she were to say that bread is now 10 *per cent higher* than last year, she would actually be talking and thinking in index terms.

Thus the formidable weapon of the economists—the "index"—reduces itself to a simple statement of the percentage change between one date and some other date. It may be a change in price (as for a loaf of bread), or a change in rate of activity (as in the number of daily round trips made by a delivery truck), or a change in quantity (as in number of bushels of wheat). The important point is that an index simply registers percentage change as com-

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pared with some given date. The date used for comparison is said to represent 100. If the next date on which measurements are taken shows a 10 per cent rise, then the index for this new date is said to be 110; if a drop of 10 per cent occurs, then the index for the new date is said to be 90; and so on.

An index is thus a useful measuring stick whenever we want to compare such things as price changes or quantity changes over a long period of years. Thus, if we say that the index of best grade bond prices, compared with 1926 as 100, now stands at 130, we simply mean that the average price of high-grade bonds today is 30 per cent higher than it was in 1926. But there are several points which everyone should understand clearly about "indexes." Otherwise they can be very misleading.

The first point to remember is this: an index has nothing to do with the idea of "normal" or "abnormal." Many people, when they see that some index uses 1926 as 100, assume at once that 1926 must have been considered a "normal" year. Nothing could be more misleading. It makes no difference what year is used as 100. It might be the most abnormal year of the century, but it would still serve as a perfectly good measure of percentage change over following years. Because of the importance of this point, and the gross misunderstandings concerning it, let me give an example, using three different years.

Suppose that wheat was \$2 a bushel in 1920, \$1 a bushel in 1926, and 50 cents a bushel in 1932. If we were taking 1926 as the "hundred year" for an

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index, we would then say that the index figure for 1920 was 200, the figure for 1926 just 100, and the figure for 1932 exactly 50.

But suppose we took 1920 as the "hundred year." Then the new index figures would be 100 for 1920, 50 for 1926, 25 for 1932. Now, in the second index, 25 for 1932 is just one-quarter of 100 for 1920. But the first index showed exactly the same relationship. In other words, 50 for 1932 was also just one-quarter of the 200 figure for 1920. *In both cases, the figure for 1926 is one-half the figure for 1920 and twice the figure for 1932.* Thus, no matter what year we select as 100, the relationship between all the other years remains unchanged. The year we select as 100 is, of course, our "norm" or standard of measurement, but that is very different from considering it as "normal" in the sense of usual or average or unexceptional.

The next point to remember about an index is this: it enables us to compare, so to speak, apples and peanuts and dollars. If, for example, we take 1926 as our "hundred year" for both population and bank deposits, we can directly compare the percentage growth in bank deposits without having to measure separately each year the dollars of bank deposits per person. Suppose that bank deposits remain at 100 for several years while the index of population rises to 110. Then we know that for every dollar per person in the banks in 1926 there are now only 91 cents per person.¹ This process is

¹ We divide the index of bank deposits (100) by the index of population (110) and by simple arithmetic get the answer—91.

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called "taking the ratio" (or percentage comparison) between two indexes. It is particularly useful when we want to compare changes as between articles measured in different ways—such as the increase in *bushels* of wheat and the increase in *quarts* of milk. If it sounds at all complicated in theory, it at least becomes simple and helpful in practice.

But the most important point of all to remember about an index is that, standing alone and by itself, it can lead to any number of absurd and misleading conclusions. The very purpose of an index, for intelligent people, is to make possible comparisons with other related factors—as I have shown above in the case of bank deposits and population. Here is a man, for example, who owed debts of \$5,000 when he was thirty years old and debts of \$10,000 when he was forty. If we take his thirtieth year as 100, then his index of debt at forty has risen to 200. The simple conclusion seems to be that he is twice as much in debt. But is that in any sense the practical conclusion? Certainly not. We need as a practical yardstick another index—the index of his wealth in both those years. It now turns out that in his thirtieth year (100) he owned property valued at \$10,000, whereas in his fortieth year he owned property valued at \$40,000. In other words, his index of wealth rose to 400—or four times what it was ten years earlier. At thirty, his debts equaled one-half his property wealth, but at forty his debts were only one-quarter of his property wealth. He was less in debt at forty, *compared with his wealth*, than he was at thirty.

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How would we express this in a ratio or comparison of his debt index to his wealth index? At thirty, with both index figures standing at 100, the index of his "debt to wealth ratio" would also stand at 100. But at forty, with his debt index at 200 and his wealth index at 400, the result of dividing 200 by 400 would give us an index figure of 50. In other words, his debts were 50 per cent smaller *compared with his wealth* than when he was thirty years old. It amounts to exactly the same thing as saying that his debts at thirty were half his wealth whereas at forty they were only a quarter of his wealth.

In discussing the common-sense measures of the various types of inflation in the following chapters, I have avoided the use of index figures wherever possible, because I realize that in spite of their actual simplicity they are likely to prove puzzling to the layman who is not used to them. I have much preferred to make direct comparisons in figures—as, for example, to say that combined ascertainable debt of this country dropped \$3.6 billion between 1930 and 1936, instead of saying that the index of this combined debt dropped from 100 to 97.6. Nevertheless, when making comparisons over long series of years, or when comparing one depression or inflation with another, the index method is useful and illuminating and I have not hesitated to use it, whenever it helps to clarify rather than cloud an important point.

The main thing to remember is that whenever we are measuring economic conditions for *practical* reasons—because they affect our lives and our plans

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intimately—we can never afford to draw any conclusions from simple comparisons with a given year. That is one of the great fallacies in much of the popular economic writing, and one reason why the layman is forced so often to “howl his distress at the moon.” Every single economic fact is always related to some other equally important fact—and the practical man’s job is to measure the relationship between the two!

We can never use a fixed yardstick—such as the state of some one fact in a given year—without running the risk of reaching the most absurd and often damaging conclusions. Thus, if we are afraid of currency inflation, we might be greatly alarmed by a rise of several hundred millions in outstanding currency. But if we compare the currency with the gold stock back of that currency, we may find that gold has increased by even more millions than the currency itself—that today’s larger total of paper money has a greater gold backing per dollar than yesterday’s smaller total. This is only one isolated example of the layman’s measuring methods presented in the following chapters. They are all methods of relating one significant fact to another, or to a whole group of other facts. From these methods the layman can hope to make sense out of the welter of opinions of which he is usually the victim.

CHAPTER IV

The Meaning of Bond Price Inflation



THERE are some \$130 billion of bonds and equivalent notes outstanding in the United States. In 1936 the Federal debt accounted for \$34 billion, the debts of states, counties, cities, and towns accounted for another \$19.6 billion, with the balance made up of so-called private long-term debt, that is, bonds of railroads, public utilities, manufacturing concerns, real estate enterprises, and mortgages owed to banks and institutions.

Not all of these bonds represent so-called "good credit risks." The total includes many million dollars' worth of bonds of debtors who are extremely hard pressed, even in the best of times, to meet the annual interest charges. But there are also in the total many billions representing almost "riskless" investments. The owners of them are never seriously in doubt about receiving the interest payments regularly, nor about receiving the original principal back at the due date or maturity. Yet both classes of bonds, good and poor, go up and down in market

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value, and because their market price range is so wide, these price movements are of the utmost concern to all bondholders, and to all depositors or policyholders in institutions which are heavy investors in bonds.

To give a clear idea of the importance of bond prices to many millions of people—to small investors, large estates, depositors in commercial and savings banks, and owners of insurance policies—suppose we take the changes in market value over a short period of two very highly regarded railroad bonds, the Norfolk & Western Consolidated 4 per cent bonds, due in 1996, and the Atchison, Topeka & Santa Fe General Mortgage 4 per cent bonds, due in 1995. The earnings of both railroads for many long years, and right through the recent depression, have been ample to assure regular payment of interest on these particular bonds. For those interested in finer points, the Norfolk & Western bonds were and are superior in grade to the Atchisons. But in a general way both receive the highest grade “rating” and are in great favor with expert investing institutions. They are so-called “triple A” bonds. Yet what price fluctuation did they show between the low points of 1932 and the high points of 1936? Here is the record, in round figures:

	Low 1932	High 1936	Per cent increase
Norfolks.....	76	122	+60.5
Atchisons.....	75	116	+54.5

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In other words, if we suppose that a savings bank in 1932, with \$100,000,000 of deposits, and assets of \$110,000,000 (giving a surplus of \$10,000,000), had invested 20 per cent of its assets at that time in Norfolk & Western bonds, that investment by 1936 would have shown a 60.5 per cent profit. What would this have meant in dollars and in improvement of surplus for the protection of depositors? The original investment (20 per cent of \$110 million) would have been \$22 million. The profit in market value within four years would have been approximately \$13 million. Thus, if we assume no increase in deposits, the bank by 1936 would have had a surplus at market value, over and above the \$100 million owed depositors, of \$23 million instead of the \$10 million of 1932. This is an increase of 130 per cent in the size of the surplus, and represents an enormous increase in the safety of every deposit made in the bank. The bank in 1936 would have had assets of \$123 for every \$100 owed depositors, compared with only \$110 in 1932.

The same idea would have applied to an insurance company and its surplus. Yet this represents the effect of an investment in highest grade bonds only; in other words, in the type of long-term bonds with the narrowest range of price change.

Bonds of medium grades (but still of the type considered suitable for savings bank and trust investments) had a much greater price rise in this four-year period. Some of the General Mortgage bonds of the Pennsylvania Railroad, for example, showed price increases of 120 per cent—that is, a

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rise from about 50 to 110. It is safe to say that the "mixed" bond portfolios of savings banks in the \$100 million deposit class showed average increases of over 70 per cent in the four-year period. That is, total investments at market value in 1932 of about \$30 million showed increases of between \$20 million and \$22 million, thus adding incredibly to the strength of those institutions and the confidence of their millions of depositors.

The question of bond prices, and of forces that increase or inflate those prices, is thus of paramount importance to everyone who has a bank deposit, an insurance policy, personal bond investments, or an interest in a trust estate. *It is not a rich man's problem alone, but a problem intimately affecting twenty to thirty million individuals and nearly every family in the country.*

But, unfortunately, the bond problem is not a simple one of market price only. It is complicated somewhat by the question of income received. As this is a sore puzzle to many people, it is well worth explaining in simple terms, without the many minor refinements that simply confuse the main points.

The whole reason for the change in market price of "riskless" bonds depends on the current interest rates: in other words, on the income which investors expect or want from a given investment of principal. Unless we understand this quite plainly, the market prices of bonds would remain a perpetual mystery—in spite of their vast importance to all of us. Suppose, then, we illustrate the matter by discussing an imaginary highest grade bond—a bond with a 4 per

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cent coupon rate, due in twenty years from the date of purchase. We shall simply call this "the Bond." What happens to us in the matter of income if we buy that bond at a market price of 80? The following statement shows the facts in detail:

1. We pay for the Bond.....	\$ 800
2. We plan to hold it until it is paid off at "maturity" in 20 years. At that time we shall receive in cash.....	1,000
3. Thus we receive, as part of our income, the difference between what we paid and what we receive 20 years later, or.....	\$ 200
4. We also receive each year for 20 years interest at the rate of 4 per cent on the \$1,000 face value of the bond, or \$40 a year, making a total in 20 years of.....	800
5. This makes our total income over the 20 year period the sum of (3) and (4) above, or.....	\$1,000
6. If we divide this total income of \$1,000 by 20 years, we find that our average income per year has been.....	50
7. But since we paid only \$800 for the Bond, an average income of \$50 a year represents an income return on an investment of \$800 (figured in percentage) of.....	6.25 %

In contrast to this highly favorable picture for the investor, suppose that when we buy our twenty-year bond, it is selling not at 80 (as it might have sold in 1932) but at 110 (as it would probably have sold in 1936). Then what would our income be, both in dollars and in percentage, or rate, on our original investment? Again, we can show the facts in a simple table of events, as shown on page 46.

Thus, the identical bond, always with highest possible security, selling at 80 would show us an average real income of 6.25 per cent, whereas if selling at 110, it would show us an income of only

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3.18 per cent, in both cases figured in percentage of the actual dollars paid for the Bond. In dollars received per year, there would be the difference between \$50 and \$35. But suppose that, in both cases, we had the exact sum of \$110,000 to invest. Then, with the bond selling at 80, we could buy 137 bonds, with a little cash left over, and at \$50 a year

1. We pay for the Bond.....	\$1,100
2. We plan to hold it until it is paid off at "maturity" in 20 years. At that time we shall receive in cash.....	1,000
<hr style="width: 100%;"/>	
3. Thus we must deduct from our total income received the difference between what we paid and what we receive 20 years later, or a loss of.....	\$ 100
4. We receive in cash, however, for 20 years, interest at the rate of 4 per cent on the \$1,000 face value of the bond, or \$40 a year, totaling in 20 years.....	800
<hr style="width: 100%;"/>	
5. This makes our real income over the 20 year period the difference between (4) and (3) above, or only.....	\$ 700
6. If we divide this actual income of \$700 by 20 years, we find that our average income per year would be only....	35
7. And since we paid \$1,100 for the Bond, an average income of only \$35 a year represents an income return on an investment of \$1,100 (figured in percentage) of only.....	3.18%

on each bond, our average annual income would be \$6,850; whereas with the Bond selling at \$110, we could buy only 100 bonds, and our average annual income would be only \$3,500—or nearly 49 per cent less. In round figures, on a given sum of money to invest, we could get only about half the income from a twenty-year bond selling at 110 that we could get from the same bond selling at 80.

This is a reasonable and fair illustration of what happens to the income opportunities of individuals

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and institutions when the market price of bonds is shoved upward or "inflated." It is quite unnecessary to remember all the details of these two examples. But in all discussions of what inflates or deflates the prices of bonds, we can keep in mind the general point that high bond prices mean a lower percentage rate of return to the investor, and that low bond prices mean a higher rate of return; that as prices go up, the income rate goes down. The point of the illustration chosen above is simply to show that the rate of income on a given sum to be invested *changes even more violently than the market price of the bonds.*

In this case, a rise of slightly over 37 per cent in market price means approximately a 49 per cent cut in income on a given sum to be invested. Likewise, we might add, a drop of slightly over 27 per cent in price (from 110 back to 80) would mean almost a doubling of the income to be obtained on a given investment sum.¹

Thus when investors as a whole are insistent on getting a high rate of return on their bond investments they refuse to pay high prices for even the best grade bonds, and also whenever the investors are willing to accept a low rate of return they are willing to pay a high price for bonds. The practiced investor uses what is called a "yield" table or book, which shows him at a glance just what percentage

¹ It seems quite unnecessary to complicate this general statement of bond income and bond prices by showing the differences involved in longer and shorter maturity periods, or by discussing income in terms of "net yield," etc. The intricate problems of bond portfolio management would only confuse the main issue, which, by itself, is fairly simple.

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return he will get on a given bond at a given price. But this is not the concern of the layman. What he wants to know is simply the broad principle that the general level of bond prices depends directly on the percentage rate of income which investors in the mass insist on getting at any given time.

If, for any combination of reasons, investors insist on getting 6 per cent or better, then bond prices will be low, and the price of the very best bonds will be affected as well as the price of medium- or low-grade bonds. If, for a different combination of reasons, the investors are willing or glad to get as low as 3.5 per cent on their money, then bond prices will be high. This means that, if we are to attempt to measure those factors that increase or inflate bond prices, we must look to those factors that would make investors willing to take a low income return. If we can measure those factors from easily available figures, then we are on the road to a common-sense understanding of what makes a "bond inflation."

Before we take up the layman's ways and means of measuring the factors beneath bond inflations and deflations, a quick glance at the history of bond prices would help to give a sound perspective. Chart 2 shows the course of high-grade bond prices since the Civil War. Even a casual glance at it reveals this notable fact: that since the introduction of our Federal Reserve System, and the wide use of that system for the financing of the World War, the movements of bond prices have been much more abrupt than in the earlier decades. From the low

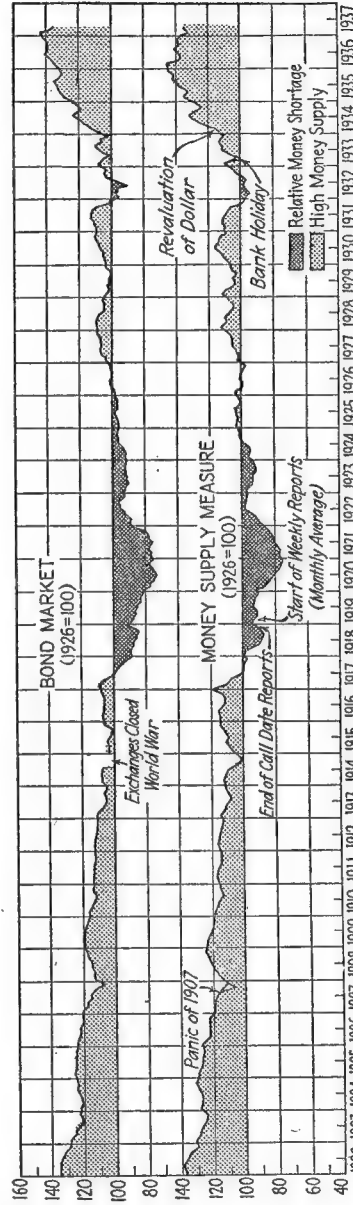
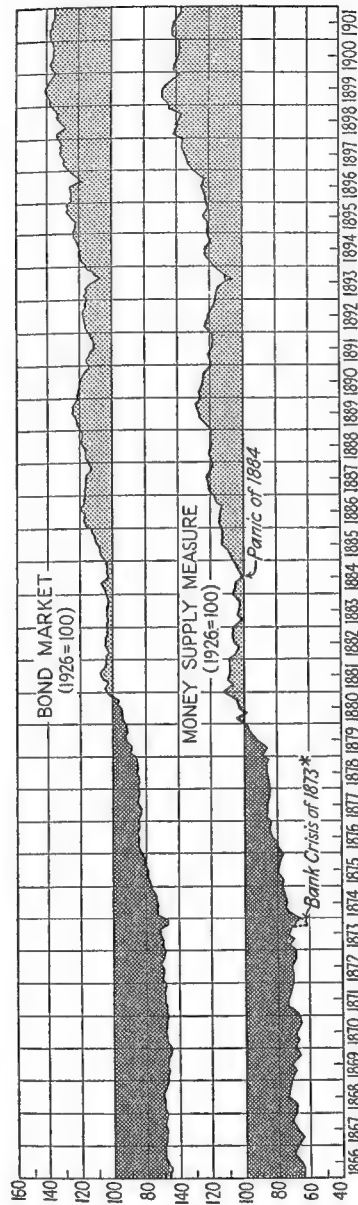


CHART 2.—A composite of factors derived from bank reports (adjusted for long-term trend), compared with 70 years of bond price fluctuations. (Reproduced by Permission of Fell, Kip and Skinner, Inc.)

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bond prices immediately after the Civil War to the very high bond prices of 1899, the rise was a gradual and orderly affair. Even the panics of 1884 and 1893 hardly interrupted the main trend. Moreover, in broad perspective, the decline of bond prices from 1900 to 1916 was barely perceptible to those living in the period. But from 1916 on, right up to 1936, we had twenty years of more or less violent fluctuation.

In the four short years from 1916 to 1920, bond prices lost all the ground built up in the thirteen years from 1874 to 1887.

From 1920 to the first quarter of 1928, there was a reasonably sustained rise, followed by a mild decline to the date of the 1929 stock market crash.

But even in 1929, bond prices remained well above the level of the nine-year period from 1917 to 1926. In other words, 1929 was in no sense a year of bond panic, and by midyear of 1931 bonds had risen to the highest prices since our entry into the World War.

Then came an abrupt crash. It carried the very highest grade bonds back to the levels of 1922—a price drop of nearly 20 per cent in less than a year. Bonds of companies whose earnings had been shattered by the depression went to new low ground for the twentieth century.

After this came the most astonishing spectacle of the whole seventy years since the Civil War—a four-year rise bringing all high-grade bond prices back to the dizzy heights of 1899. In our earlier history it had taken twenty years to bring about

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such a phenomenal rise. Under present conditions, it took only one-fifth of that time.

Naturally, everyone began to ask the same question at the same time: if bonds could rise nearly 60 per cent in four short years, wasn't it possible that they could fall in an equally short period under the new conditions? In other words, if the gradual decline from 1900 to 1920 took twenty years to work itself out under former conditions, might not a similar decline take only four or five years under conditions of 1936?

This question, of course, is unanswerable. But it does point to the imperative need for methods of carefully measuring conditions as they develop. Now that we seem to be in a period of abrupt changes in bond trends, wholly unlike the more sedate earlier decades, the need of being guided by facts rather than guesswork is three to four times as great as before—not only for individuals but also for institutions, and especially those that are responsible for the accumulated savings of millions of people.

The year 1936 closed with general nervousness among important investors as to the future of bond prices. They recognized that the bond prices of 1936 could properly be compared to the stock prices of 1929 as representing an inflated position. Should they sell high-priced bonds, consolidate the spectacular paper profits made since 1932, and await a more reasonable price level for permanent long-term investment? Or were conditions such as to justify high bond prices for a long period to come?

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Institutions were plagued with the problem of what investment to make of new funds—of new savings deposits, and new insurance premiums.

The professional prophets and seers were in sharp disagreement. One well-known university economist was predicting rising interest rates and lowering bond prices because of the probable rise in commodity prices. He professed to see a close relationship between commodity prices and interest rates. Another economist was predicting a long plateau ahead of low investment interest rates and continued high bond prices. With the experts in disagreement, what were the investors to do? Perhaps the institutions were remembering the conflicting advice of early 1934 which led many of them to forsake the high-grade long-term bond market just before it began its most spectacular rise. At all events, confusion prevailed in high quarters and in low.

Now, as I have said before, the accurate measurement of current conditions, like a look at the barometer, the thermometer, and the sky overhead, does not enable anyone to be a long-term forecaster. But it does permit one to follow his nose intelligently and to know what is going on here and now. The measurements suggested in the next chapters for analyzing the current forces at work on bond prices are necessarily rough. They do not compare in sensitivity and accuracy, for example, with the "Measure of Money Supply" shown on the chart on page 49 (Chart 2). But that measure is one requiring the most careful and precise handling of complex statistics, and is hardly suitable for use by

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the inquiring and interested layman. It is quite as common sense in principle as are the broader measurements we are now going to discuss, but it demands many intricate calculations far beyond the scope and purpose of this book. What we are chiefly interested in, for present purposes, is a way of using facts published in every important newspaper to determine in a broad way whether or not we are in a period of bond price inflation.

One more word of explanation. Since rising bond prices are the opposite of declining interest rates, we can describe a period of bond price inflation with equal accuracy by calling it a period of investment interest rate deflation. They are merely opposite aspects of the same thing.

CHAPTER V

How to Measure Bond Price Inflation



THE best way to approach any economic measuring system is usually somewhat like the work of a detective. In other words, we are dealing with the actions of human beings and our search is for the logical motives for those actions. If we can discover the motive that might determine an investor to pay higher and higher prices for bonds, and to accept a lower and lower rate of return on his money, we are well on our way toward finding how we can measure the forces behind his motive.

For example, the man who just manages in a given year to save \$1,000 for investment has a strong motive to make that \$1,000 earn for him the highest possible safe return. He is accustomed, let us say, to living on \$4,000 a year. Over a period of years he would like to save and invest enough money to give him a retirement income of \$2,000. If he can get \$50 (or 5 per cent) on every \$1,000 he saves and invests, he will have his \$2,000 of income as

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soon as he has saved and invested \$40,000. But if he can get only \$40 (or 4 per cent), then he must save and invest \$50,000. That would mean fifty years of saving and investing. Having comparatively little money, he wants it to work for him to his best possible advantage.

But let us suppose that he suddenly becomes quite successful in business, so that he can save \$5,000 a year. To be sure, he now wants \$4,000 a year as retirement income. But, even so, he could save enough, invested at 4 per cent, to bring him the desired income by only twenty years of saving and investing. This is a big improvement over fifty years. For this reason, he is less urgent in seeking a 5 per cent investment rate. In brief, the more money he has, the less pressure he is under to look for high return. The bond salesman who once had great difficulty in making him buy anything less than a 5 per cent bond now finds him quite affable at the prospect of 4 per cent. In one case, *the scarcity of his investment money gave him the motive for insisting on a high return.* In the other case, *ample investment money gave him a motive for accepting a lower return.* Translated into larger terms, whenever there is a rising tide of money seeking investment, the motive for accepting a general lowering of interest rates is on the increase.

But this is only one side of the picture—the lender's. How about the borrower? A borrower is usually motivated by one of two contrasting reasons. Either he sees a chance in business to make more on a given sum of money than the interest he must pay

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to borrow that money, or else he is in dire need of money to keep his business going at all and is willing and eager to pay in interest even the entire amount the new money will make for him. He is fearful of only one thing—of being forced out of business by lack of current funds. “Keeping going,” in hope of a better future, is more important than making a profit here and now.

But unless he hopes to make money on “other people’s money” or must have more money to keep going at all, the average man simply does not borrow money, and prefers to work with his own capital. Again translating this into larger terms, when business in general is earning high profits, the motive for borrowing increases. When business in general is threatened with bankruptcy for lack of current funds, the motive for paying high interest increases. When general business is earning only modest profits, borrowing demand slackens.

Thus the interest rate, as we can readily see, is not determined by one factor alone—such as the amount of money seeking investment—but by two factors, the motives of the borrowers and the motives of the lenders at any given time. There may be a rising tide of money to invest and, at the same time, a rising demand from borrowers for the use of “other people’s money.” If the supply and demand just about keep pace with each other, it is common sense to assume that the prevailing interest rate will not change violently and that bond prices will remain fairly stable.

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On the other hand, there may be a sudden curtailment of money seeking investment at the very time that bad business conditions make it imperative for business concerns to borrow, at any price, in order to keep going. In this case the lenders have a motive to make every available investment dollar earn the maximum interest for them, and the borrowers have every incentive to pay whatever interest is asked in order merely to keep above water. In such periods it would take no wizard to see that interest rates would rise rapidly and bring about a heavy fall in bond prices.

In still another period we might have business at large making modest profits—but not enough to make large further borrowing a profitable operation—and coincident with this a formidable rise in the amount of money seeking investment. With this increased supply in lenders' hands and this curtailed demand from borrowers, the natural conclusion would be a marked lowering of interest rates and a sharp rise in bond prices.

Here then we have three distinct combinations of supply and demand:

The first more or less typical of the period from 1922 to 1928 (large business profits and increasing investment funds).

The second typical of 1931 and 1932 (necessitous borrowing coming at a time of diminishing investment funds).

The third typical of the period from 1934 to 1936.

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The first showed fairly stable bond prices, at an investment rate running from 4 to 4.5 per cent. The second showed an investment rate sharply rising to between 5 and 6 per cent. The third period showed steeply rising bond prices, with the investment rate dropping from 5 to about 3.25 per cent and even lower. We know this from the delightful advantage of hindsight. But how could we have diagnosed the conditions while they were actually developing?

For example, when bond prices began an almost vertical drop in July and August of 1931, how could we have told, from current facts, that they were likely to continue dropping until basic conditions altered? Or, when bond prices had begun to rise gently in early 1934, how could we have told that they were likely to continue their rise until basic conditions gave some warning signal of a reversal of motives of either lenders or borrowers or both?

These are not academic questions. Even the most experienced investors made serious mistakes in those very periods. The mistakes of the second half of 1931 helped eventually to bring on the Bank Holiday. The mistakes of 1934 helped to exaggerate the reductions in dividends by banks and insurance companies. These mistakes were repeated in thousands of individual cases of investors from one end of the country to the other. How can the individual measure the underlying facts for himself?

This brings us to the concrete problems of how to use the banking figures to tell us exactly what is going on. How, for example, can we determine

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when the money available for investment is rising, and how can we determine whether or not the demand for the use of money is mounting as rapidly as the supply of money?

I am going to describe first of all a very simple broad measure of supply compared to demand—namely, *total bank deposits* (considered as supply), *compared with total bank loans plus total Federal government securities held by the banks* (considered as demand).

The accompanying chart (3) shows on the upper line an index (see pages 35 to 39) of high-grade bond prices since 1919, and on the second line an index of the supply-demand ratio of total deposits to combined loans and government securities held by the reporting banks.

Even the most casual glance at the two indexes shows, in a broad way, how bond prices have moved up as the supply-demand ratio has moved up, and how bond prices have declined as the supply of money grew less compared with the demand for its use. In these indexes the average price for bonds in 1926 is considered as 100, and the ratio of supply to demand in 1926 (actually 119.3 per cent) is also considered as 100.

As I have explained before (see page 36), this does not mean that 1926 was necessarily a “normal” year in the sense of usual. It merely means that 1926 is used as a base year, or measuring year, for both indexes, so that the percentage changes in both of them as between 1926 and any other year can be directly compared. In the language of school-

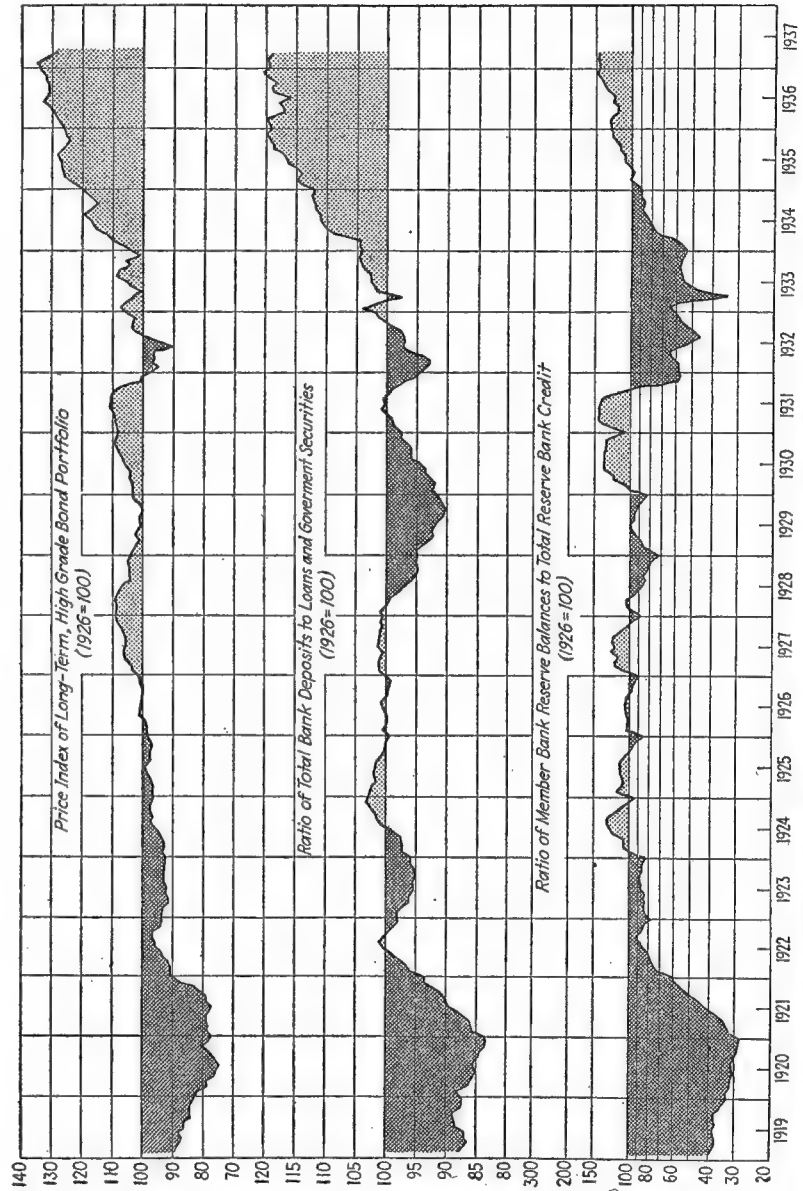


CHART 3.—Suggested measures compared with bond prices since 1919.

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book arithmetic, the year 1926 is used as the "common denominator."

It is quite evident from the chart that some close relationship exists between any marked increase in this supply-demand measurement and an increase or inflation in bond prices. But it is worth while asking just why this particular measure should give as close a comparison as it does to bond price trends.

Suppose we examine the factors used. What do they mean, either in terms of mass psychology or in terms of men and money as we know them?

First of all, the total bank deposits obviously represent the major money resources of the entire people. Practically the only way they can pay for bonds they may want to buy is by drawing a check on their bank deposits. On the other hand, they must reserve some of their money to pay off their bank loans in case of necessity. These bank loans represent money which they have needed in the past or may still need, and the deposit money created by those loans (see pages 30-32) is the necessary offset to the borrowed money if the public is to remain solvent.

To a large extent, the same is true of government securities. The government borrows money from the banks by selling its bonds to the banks only when the entire public, represented by the government, has need of more money. The entire public, collectively, owes the total of the government debt to the banks, and the entire public, as a group of individuals, also owes the sum total of direct loans granted by the banks.

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But if the sum total of all business and international transactions results in deposits climbing faster in proportion than the combined public and private demand for bank credit, then the public is, of course, gaining in bank resources faster than it is going into debt, and has left over a greater *margin* of free and clear money to put out at interest. For the moment we do not have to be concerned with how this comes about. It is quite enough, for practical purposes of measurement, that it does come about at certain periods, and that when it comes about there is a marked tendency for investment interest rates to go lower, and for bond prices to go higher, or inflate.

It is important to remember that for the time being we are discussing measures of conditions affecting not all kinds of interest rates, but primarily that one kind called the "investment interest rate." It is the investment rate that affects bond prices. There are certain other types of lending on which the interest rate can rise violently without seriously affecting the investment rate or bond prices. Let me illustrate this with a few historical examples.

In the panic of 1893 the interest rate on short-term bank loans, and especially on demand or "call" loans backed by security collateral, shot to unbelievable heights. As early as 1890 "call money" topped 40 per cent. The year 1893 itself brought full panic, with gold reserves precariously low, many bank failures, the use of clearing-house certificates as currency, and more than 140 railroad receiver-ships. But what happened to high-grade bond prices? They did decline slightly from the middle

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of 1889 to the final crisis in August, 1893. But even during the latter month they remained considerably higher than, let us say, the bond prices of 1926!

For only three short periods from 1914 to 1931 did high-grade bond prices touch a higher point than at the height of the panic of 1893!

Something of the same sort happened in the panic of 1884, with phenomenal rates being paid for short-term loans while bond prices remained reasonably stable. Neither in 1884 nor in 1893 did the investment interest rate rise to anything approaching its figure for 1920 and 1921, nor for the summer of 1932.

Obviously, then, different factors are often at work as between investment rates and the rates on short-term loans. For the moment, we are discussing only those factors measuring forces which primarily raise or lower the interest rate on long-term investment bonds.

The first measure, described above (namely, the ratio of total deposits to bank loans plus government securities held by the banks), shows a fairly close correspondence in the last two decades with the movement of long-term bond prices—not so close as the much more complicated measure shown on Chart 2, but quite close enough to help the layman in appraising current conditions for himself, and to prevent his being misled by every wave of hysteria, such as the one which gripped so many investors in early 1934.

This measure (as shown in the chart) was rising steadily uphill throughout 1934, indicating that the public's supply of funds for investment was

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rapidly gaining ground compared with credit demands on the banks, including even the borrowing demands of the Federal government.

But there is a second measure, equally simple, which the layman can make up from his daily newspaper, to serve as a check on the first. This one is taken from the weekly report on the condition of the twelve Federal Reserve banks combined. *It is the ratio, or comparison, between the money deposited in the Federal Reserve by the member banks of the system, and the total credit being extended by the Federal Reserve banks.*

The leading banks of the country are members of the Federal Reserve System. In fact, they are the main stockholders and owners of the Federal Reserve. Under the law they must carry deposits of their own with the Federal Reserve banks, forming a sort of central pool as a reserve fund against their own liability to their own depositors. The amount of that obligatory reserve fund varies from time to time, and has lately been increased. But for many years, the member banks were required, on the average, to maintain deposits with the Federal equal to about 8 per cent of the public's deposits with the member banks themselves. In emergencies, the Federal can turn around and lend funds to the member banks, and at all times can, under law, provide them with their currency needs.¹

When the member bank deposits at the Federal are high, and when the Federal is not making many

¹ This is obviously a loose and inaccurate description of the Federal Reserve System, but quite adequate for present purposes of the financial layman.

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loans to individual member banks, it is obvious that quite a margin of funds piles up which the Federal can use for investments of its own. These investments usually take the form of Federal government bonds or notes or other evidences of indebtedness. In short, the Federal is a banker's bank, and makes loans and investments like any other bank, but only recently and on a small scale has it come in touch with the public at large. Yet because of its key position, what it does in the way of making loans or investments has considerable influence on interest rates.

As in the case of the member banks, when deposits at the Federal rise faster than the use of those deposits in various lending or investing operations, we can say that the *supply* of funds at the Federal is gaining on *demands* for credit.

How do these two measures compare or "check" on each other—the first taken from the member bank report and the second from the Federal Reserve report?

Both the member bank measure and the Federal Reserve measure are shown on Chart 3 on page 60, with the course of bond prices charted directly above them.¹ With two such measures as a guide, what would the layman have determined for himself, let us say, in early 1934? Would he have shared the panicky feeling of some of the big banks as to the future of high-grade bond prices? Or would he have said to himself that with both measures of

¹ As the movements in the Federal measure are much more violent in extent than the other, it is plotted on the chart in a different scale.

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supply to demand rising sharply, the chances favored higher rather than lower bond prices—at least until some reversal of basic conditions appeared in the weekly reports?

And what would he have said during the period of declining bond prices from July to September of 1934? At this time, the Director of the Federal Budget had come to a sharp disagreement with the administration over continued deficits. In due course he resigned. Again some of the banks and large investing institutions showed signs of jitters. Was government credit about to decline? Had high bond prices passed their peak?

During these two critical months, a high-grade bond, such as an Atchison, Topeka & Santa Fe General 4 of 1995, fell from 105 to about 98—a drop of nearly 7 per cent. But what did the layman's two supply-demand measures show? Both had been rising and continued to rise right during this two months' baby crisis. Common sense, then, pointed to the purely temporary character of the bond decline—a decline based on rumors and vague fears rather than measurable facts.

Subsequent events, of course, fully justified this common-sense conclusion. Bond prices resumed their rise after September, and the Atchison bonds, to take only one example, eventually reached a price of over 115. Any institution that had sold its Atchisons in a fit of nerves in September would have lost an ultimate gain of over 17 per cent—that is, a gain of \$17,000 for each hundred bonds. Since many institutions hold blocks of a thousand or more

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bonds of the Atchison type (\$1,000,000 at par value) the ultimate losses from failure to measure basic facts would have amounted to \$170,000 from each such block sold. We might well ask, therefore, what is the price of guesswork and volatile opinion as against simple measurement of facts and some confidence in the old-fashioned law of supply and demand?

Of course, no measures are perfect. That is why I have placed both the suggested measures in direct comparison on Chart 3 with the high-grade bond market itself—to show the imperfections as well as the helpful indications.

Even a casual glance at this comparison will show that between 1932 and 1933 the member bank and Federal Reserve measures moved *in opposite directions*. The relative shortage of funds increased at the Federal, but diminished in the member bank System. What would the layman conclude in such an event? He would probably (and quite properly) say to himself that bond prices might hover somewhere between the two extremes.

And, of course, that is just what happened. For a year there were sharp up and down movements in bond prices. The real "bull" market in bonds did not get fully started until 1934, after both supply-demand measures had begun to move upward and no longer showed opposing trends. Moreover, the layman would have remembered that the member bank measure deals in totals far larger (and therefore more like tidal waves) than those involved at the Federal. In any disagreement of trend, he would

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probably give more importance to the member bank tides than to the Federal Reserve waves.

Another interesting period of comparison between the two measures, as shown on Chart 3, was in the months just before the heavy crash in bond prices from July of 1931 to the middle of 1932.

In the member bank measure, supply continued to gain on demand until May or June of 1931, and then declined only mildly. But the Federal Reserve measure began an almost vertical drop in July. Yet the highest grade bond prices remained reasonably firm until the end of July, and did not begin their vertical drop until the month of August. Thus, before the acute crisis set in, both measures confirmed a lessening of supply compared with demand, but the Federal Reserve measure was the first to show drastic weakness. What conclusion would the layman have reached?

He would have gathered a growing sense of caution from the flatness of the Federal Reserve measure up to, let us say, the end of June. Then he would have seen an abrupt decline at the Federal, accompanied by a distinct reversal in the member bank measure. Before the end of July, both measures would have told the same story—demand gaining heavily on supply, leading to only one common-sense decision, namely, to dispose of bonds unless he was willing to ride out a possible severe crisis. And this decision, of course, would have been entirely correct.

But would not this involve an attempt to use the banking measures as a "forecasting" device?

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Only, as I have suggested before, if "forecasting" is to be confused with an intelligent appraisal of *what is actually happening here and now*. It is one thing to forecast next summer's weather in a farmer's almanac, and quite another thing to decide from this morning's barometer and thermometer and cloud conditions whether or not it is likely to rain today. All we can say is that the banking figures are extremely sensitive to broad changes *actually taking place*—more sensitive, on most occasions, than public opinion—and that changes in actual conditions frequently occur, and can be measured from banking reports, shortly before the public at large becomes fully aware of them.

This merely amounts to saying that most of us, as "the public," are unobservant of minor warning signals and do not suspect that it is going to rain until the skies begin to dump water on our heads. Most of us go to the office in the morning without looking at a barometer. If the sun is shining, we take along no raincoat. Then by lunchtime the sky is purple with heavy clouds. When we return from lunch we get drenched. Public opinion often acts just that way—including the opinion of many important institutional investors. It waits for the storm to break instead of preparing while the storm is plainly brewing.

Another word of caution is in order, however, concerning these two broadly helpful measures of money supply. Both of them have a slight tendency to correspond more with the short-term interest rate than with the rate on long-term investments.

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A further glance at Chart 3, for example, will show that both measures would have indicated slightly lower bond prices toward the end of 1927 than in 1924. Actually, the bond market *rose* during this four-year period—rose, in fact, until about March of 1928. This means, of course, that the *investment interest rate* was declining, in spite of a rise in *short-term interest rates* on bank loans.

The only measure of money supply of which I have knowledge that actually indicated the reason for the rising bond prices of 1924 to 1928 is the one shown on Chart 2. This is the measure that is somewhat too complex to be of service to the layman from facts in his daily newspaper. In principle it is quite as simple as the others, but it involves calculations and adjustments as to the long-term trend between bond interest rates and the public's use of banking facilities that are beyond the scope of this book. It does, however, illustrate the principle that accurate measurement can be of substantial assistance in forming investment judgments, and its close correspondence with bond prices ever since the Civil War at least suggests that it is one valid way of measuring supply and demand.¹ Its clear

¹ In compiling this measure, no adjustments were made for the violent upheavals and changes that occurred during the seventy-year period—for the resumption of specie payment in 1879, for instance, nor for the introduction of the Federal Reserve System in 1914, nor for the abandonment of the gold redemption standard in 1934. It was compiled in the conviction that regardless of these changes in "form," nothing would change the basic operation of the law of supply and demand.

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downtrend during most of 1936 gave definite warning of the drastic declines in the highest grade bond market in early 1937.

The businessman and the bank borrower, however, are interested not only in what inflates bond prices (by deflating investment interest rates), but in what inflates short-term interest rates as well. The man who buys stocks or commodities on borrowed money is intensely concerned in anything that may increase the interest he must pay on his borrowed funds. The homeowner faces the same problem in renewing a short-term mortgage. The businessman needs to know the conditions affecting the rate on his commercial loans at the bank.

For these reasons we need a simple measure of the facts likely to inflate short-term money rates. In an obvious sense, this is the reverse of the kind of forces that inflate bond prices. Because of this difference in viewpoint, and because the factors affecting investment rates are rather different from those affecting short-term money, a separate discussion is in order. The next chapter takes up the problem of how to measure the forces making for inflation of short-term money rates.

The Arithmetic of the Measures

A. The Ratio of Deposits to Total Bank Loans plus Government Securities.

Like all other measures made from member bank reports, the figures for this ratio can be found every Tuesday morning in leading news-

SEVEN KINDS OF INFLATION

papers, as of the close of business the preceding Wednesday. For most purposes, however, monthly comparisons are sufficient. This means looking in the Tuesday newspaper just following the Wednesday nearest to the end of any given month. Taking October, 1936, figures for purposes of illustration: Wednesday, Oct. 28, was the last Wednesday of the month, and the report for that date appeared in the newspapers of Tuesday, Nov. 3.

This report, as issued by the Federal Reserve Board, appeared in the form on page 73 (except for the left-hand numbers).¹

To get our figure for total deposits, we simply add up items 14 to 17 inclusive (under the heading of "LIABILITIES") which gives us a figure of \$27.617 billion. We can jot this down in a notebook under the heading of "Supply."

For the "demand" side of the comparison, we simply subtract from item 1, "Total Loans and Investments," the "Other Securities" listed under item 10, which gives us a total of \$19.252 billion.

To get the "ratio" of our supply figure to our demand figure, we divide the former by the latter, as follows:

$$\begin{array}{l} \text{October, 1936, "supply"} \quad \$27.617 \\ \text{Divided by October, 1936, "demand"} \quad 19.252 \end{array} = 1.434$$

In other words, supply exceeds demand by 43.4 per cent—or, as we would express it in a ratio, supply is 143.4 per cent of demand.

Now—if we want to make a useful "index" of this ratio, so as to compare it readily with other months and years, we can again *divide* our October, 1936, ratio of 143.4 per cent by the actual average ratio for the year 1926, which was 119.3 per cent. Thus:

$$\begin{array}{l} \text{Ratio for October, 1936} \quad 1.434 \\ \text{Divided by ratio for year 1926} \quad 1.193 \end{array} = 1.202 \text{ or } 120.2 \text{ per cent}$$

In this way we arrive, by simple arithmetic, at an "index" of deposits to loans plus governments of 120.2 compared to 1926 as 100.

If we want to see what change there has been during the year, we can find from the bank report the corresponding figures for Wednesday, Oct. 30, 1935, on the right-hand column of the report. The figures for a year back are given only as *plus* or *minus* changes in this year's report compared with last year's; but all we have to do is to add or subtract the changes to get our corresponding totals for 1935. This shows us

¹ For recent changes in the report form, see page 143.

HOW TO MEASURE BOND PRICE INFLATION
CONDITION OF WEEKLY REPORTING MEMBER BANKS
IN 101 LEADING CITIES¹

(In millions of dollars)

	Oct. 28 1936	Increase or decrease since	
		Oct. 21 1936	Oct. 30 1935
ASSETS			
1. Loans and investments—total.....	22,517	— 54	+2,139
2. Loans to brokers and dealers:			
(a) In New York City.....	933	— 32	+ 154
(b) Outside New York City.....	220	+ 7	+ 68
3. Loans on securities to others (except banks).....	2,026	+ 12	— 49
4. Acceptances and commercial paper bought.....	313	— 3	— 16
5. Loans on real estate.....	1,143	....	— 3
6. Loans to banks.....	53	— 3	— 28
7. Other loans.....	4,033	— 11	+ 693
8. U. S. government direct obligations....	9,274	— 12	+1,097
9. Obligations fully guaranteed by U. S. government.....	1,257	+ 3	+ 124
10. Other securities.....	3,265	— 15	+ 99
11. Reserve with Federal Reserve banks...	5,390	+ 40	+ 758
12. Cash in vault.....	405	+ 12	+ 55
13. Balances with domestic banks.....	2,371	— 18	+ 152
LIABILITIES			
14. Demand deposits—adjusted.....	15,340	+112	+1,742
15. Time deposits.....	5,065	— 7	+ 166
16. U. S. government deposits.....	704	— 68	+ 157
17. Interbank deposits:			
(a) Domestic banks.....	6,041	— 43	+ 817
(b) Foreign banks.....	467	+ 1	+ 94
18. Borrowings.....			

¹ For recent changes in report form, see page 143.

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that in October, 1935, "supply" totaled \$24.641 billion and "demand" \$17.212 billion. So our ratio for 1935 was:

$$\frac{\text{Supply } \$24.641}{\text{Demand } 17.212} = 1.431 \text{ or } 143.1 \text{ per cent}$$

As we can see at a glance, this October, 1935, ratio is only fractionally below the October, 1936, figure. But to bring it to 1926 "index" form, we again divide, as follows:

$$\frac{\text{October, 1935, ratio } 1.431}{\text{Divided by ratio for year 1926 } 1.193} = 1.199 \text{ or } 119.9 \text{ per cent}$$

Thus we find that our index of supply to demand has risen only from 119.9 to 120.2 in a whole year. If we compare this with the course of the same index (as shown on Chart 3, page 60) for 1934 and 1935, our natural conclusion would be that the *rate of rise* in this factor had greatly diminished during 1936, making much higher bond prices for the immediate future far from likely.

By keeping up this index at the end of every month, the newspaper reader can gain a good approximate idea for himself of whether (as so many told him in early 1934) we are headed, at any given time, for an immediate "bond price crash" or not.

B. The Ratio of Member Bank Deposits at the Federal Reserve to Federal Reserve Credit in Use.

The figures for this ratio are to be found in Friday newspapers, as of the close of business the preceding Wednesday. Once more, we want the *monthly* comparisons, and therefore take the report for the Wednesday nearest to the end of the month. For illustration, we again take a report for Wednesday, Oct. 28, 1936, which appeared in the newspapers of Friday, Oct. 30.

The first part of this report, as issued by the Federal Reserve Board, appeared in the form on page 75 (except for the left-hand numbers).

Fortunately, the two items we need for our supply-demand comparison are both given in this report as separate items, requiring no additions.

The first, representing "supply," is item 10, "Member Bank Reserve Balances," which, in this case, is \$6.732 billion.

The second, representing "demand," is item 6, "Total Reserve Bank Credit"—or, in this case, \$2.462 billion.

HOW TO MEASURE BOND PRICE INFLATION

(This item is the total of items 1 to 5 inclusive—and in 1936 consisted chiefly of United States government securities in the investment portfolio of the Federal Reserve banks.)

CONDITION OF FEDERAL RESERVE BANKS (In millions of dollars)

	Oct. 28 1936	Increase or decrease since	
		Oct. 21 1936	Oct. 30 1935
1. Bills discounted.....	6		
2. Bills bought.....	3	....	— 2
3. U. S. government securities.....	2,430		
4. Industrial advances (not including \$23 million commitments—Oct. 28).....	26	....	— 7
5. Other Reserve bank credit.....	—3	....	— 3
6. TOTAL RESERVE BANK CREDIT..	2,462	— 1	— 12
7. Monetary gold stock.....	11,031	+23	+1,345
8. Treasury currency.....	2,514	....	+ 113
9. Money in circulation.....	6,302	— 9	+ 616
10. Member bank reserve balances.....	6,732	+39	+1,079
11. Treasury cash and deposits with Federal Reserve banks.....	2,490	— 1	— 175
12. Nonmember deposits and other Federal Reserve accounts.....	483	— 8	— 73

From these figures we get our ratio as follows:

October, 1936, "supply" \$6.732
Divided by October, 1936, "demand" 2.462 = 2.734 or 273.4 per cent

In other words, supply in this case is 173.4 per cent greater than demand—or, expressed as a ratio, supply is 273.4 per cent of demand.

To reduce this ratio to an index figure with 1926 as 100, we do just as in the case of the member bank ratio above, and divide the October,

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1936, ratio by the average ratio for the year 1926, which was 175.7 per cent. Thus:

$$\begin{array}{l} \text{Ratio for October, 1936} \quad 2.734 \\ \text{Divided by ratio for year 1926 } 1.757 \end{array} = 1.556 \text{ or } 155.6 \text{ per cent}$$

Thus our "index" for this ratio stands 55.6 per cent higher than in 1926.

As in the case of the member bank ratio, we can also find the change from October, 1935, by looking in the right-hand column. During the year, we find that item 10 (supply) has *increased* \$1.079 billion, so we *subtract* this from the 1936 total and get \$5.653 billion as our "supply" figure for October, 1935.

But during the same year item 6 (demand) has *decreased* by \$0.012 billion, so we *add* this to the 1936 total and get \$2.474 as our "demand" figure for October, 1935.

Thus our 1935 ratio becomes:

$$\begin{array}{l} \text{"Supply," October, 1935} \quad \$5.653 \\ \text{Divided by "demand," October, 1935 } 2.474 \end{array} = 2.285 \text{ or } 228.5 \text{ per cent}$$

To reduce this, too, to an index, we again divide as follows:

$$\begin{array}{l} \text{Ratio for October, 1935} \quad 2.285 \\ \text{Divided by ratio for year 1926 } 1.757 \end{array} = 1.301 \text{ or } 130.1 \text{ per cent}$$

Thus, during the year (and unlike the almost stationary member bank ratio) this Federal Reserve supply and demand ratio has risen from an index (1926 = 100) of 130.1 to 155.6.

Since we use these two ratios as a check, each on the other, and find that one has maintained itself almost unchanged while the other has risen sharply, we might have expected high-grade bond prices for the immediate future to remain firm to rising. (As a matter of record, bond prices *did* rise mildly after October, 1935. But early in 1937, also as a matter of record, the member bank ratio began to decline, indicating, for the time being at least, a change of trend.)

CHAPTER VI

Inflation of Short-term Interest Rates

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EXCEPT for what is technically known as a "discount operation," the question of "price" does not enter into matters involving short-term money rates. In other words, we borrow \$1,000 from the bank or from a friend for a given number of months at a given annual rate of interest. But for all practical purposes the price of the note we give as borrower remains fixed at \$1,000. It does not fluctuate, like the price of a bond. When we "discount" a note, we apparently sell it at a price lower than its face value, but even that price difference reflects in fact the going interest rate.

At all events, just as it is more convenient to speak of bond prices than of bond "yields," so it is more convenient and practical to speak of the interest "rate" on short-term money than of the price (or discount) at which a short-term note can be sold. For this reason it is far simpler to discuss short-term money rates in terms of what makes them go up—or inflate—just as we discussed

## SEVEN KINDS OF INFLATION

bonds in terms of what made their price go up, or inflate.

Of course, as we have seen, a deflation of the investment interest rate is the same thing as an inflation of bond prices. The word we prefer to use depends on our viewpoint. But it has been agreed that we could discuss various kinds of "absolute" inflation, for convenience and simplicity, as a "raising process." In this chapter, then, we shall look at the ways and means of measuring those forces that *raise* short-term interest rates.

Once more we must look to the old-fashioned law of supply and demand. If the demand for the use of money rises faster than the supply of money to lend, then we would expect interest rates to rise. So far, this is just turning the measures for bond price inflation upside down—dividing "demand" by "supply" instead of "supply" by "demand." But there is more to the problem than that. We know, from experience, that short-term interest rates, unlike bond prices, fluctuate within wide and violent extremes.

In a period when the bond interest rate (or the inverse of its price) may vary from 6 to 3 per cent, certain short-term money rates may vary from 20 to less than 1 per cent. We also know that at certain times (like the four years from 1924 to 1928), the interest rate on bonds and the interest rate on short-term loans may go in opposite directions.

To measure the influences on short-term loans, therefore, we need to do more than simply turn our bond price measures upside down. We need to use

## INFLATION OF SHORT-TERM INTEREST RATES

different factors, more sensitive ones, and ones that show a much wider percentage variation. What are these factors, and how do we use them?

In the first place, we must remember that there are several distinct kinds of short-term money—ranging from that prime form known as “bankers’ acceptances” through all categories of general bank loans and “call” money to very short-term bonds and notes. For our present purposes, however, it is probably enough if we consider, first, the interest rate charged on general bank loans and, second, the highly volatile and sensitive rate on “bankers’ acceptances.”

For the general bank loan rate, the weekly reporting member bank statements again form our best source of figures; and, fortunately, both the needed factors are simple.

For “demand” we can look to total bank loans; and for “supply” we can take almost the same figure of total deposits used in the member bank measure for bond prices described in the last chapter.

To see how closely its movements compare with the interest rates charged on short-term loans, a glance at Chart 4a will be sufficient.

This chart carries, on the top line, the average prevailing interest rate charged borrowers by the leading banks of the country. This is a figure reported regularly every month by the Federal Reserve Board at Washington. It gives separately the rate charged in New York, in eight other northern and eastern cities and in twenty-seven cities of the

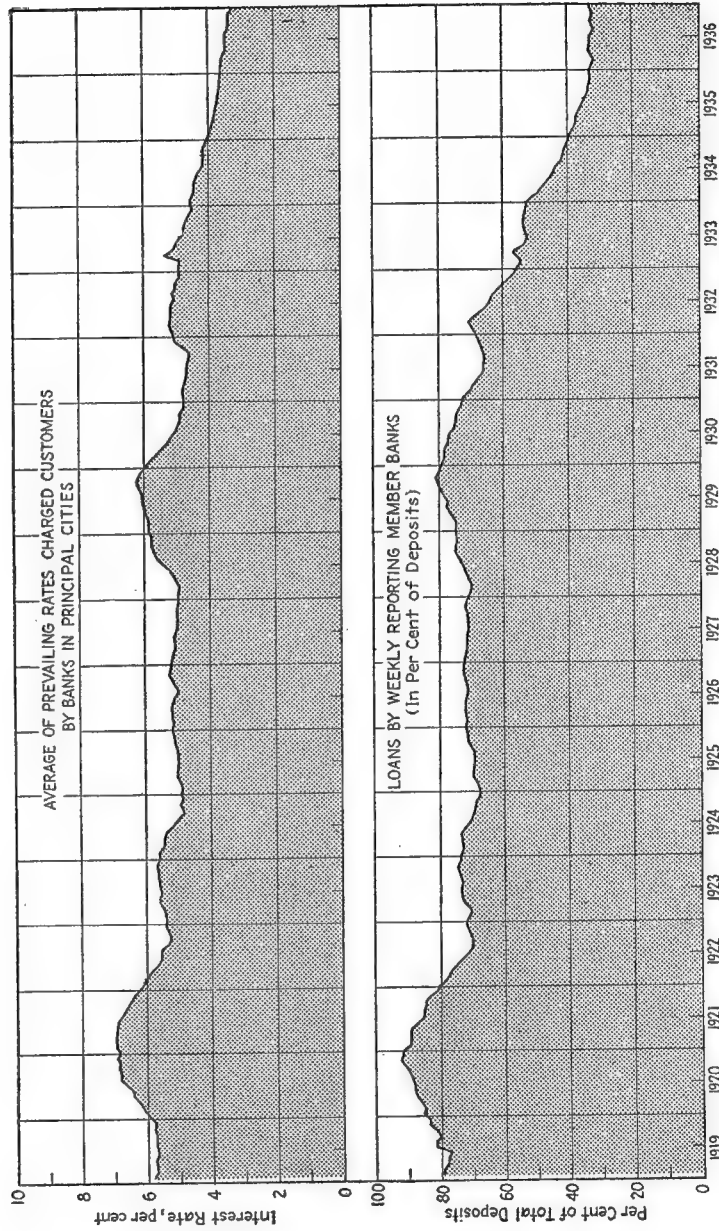


CHART 4a.—Suggested measure compared with the general bank loan rate.



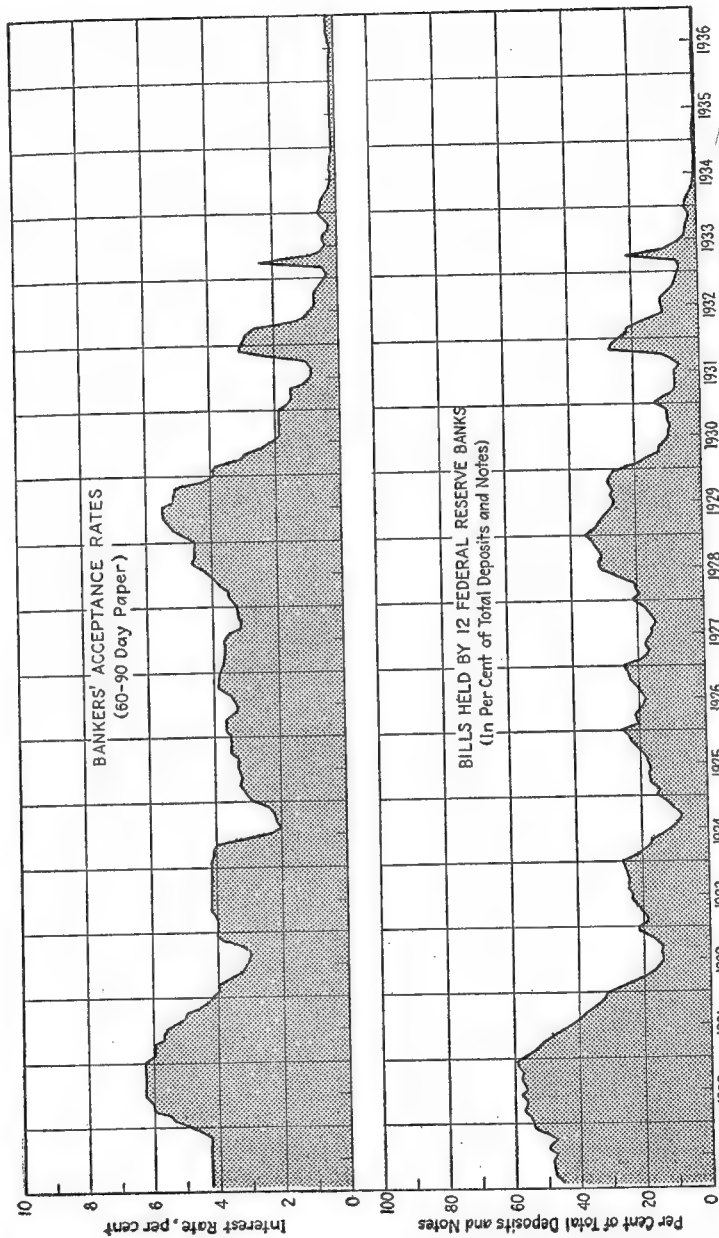


CHART 46.—Suggested measure compared with the shortest term money rates.

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South and West. The chart shows the average of all three rates.

On the second line the chart shows the actual ratio of total loans to total deposits in the weekly reporting member banks. The closeness of correspondence between the two trends is ample evidence of the value of this simple demand-supply measurement in determining what the immediate trend of short-term bank loan rates should be.<sup>1</sup>

The reasons behind this measure are both simple and logical. If loans rise faster (in percentage) than total deposits, then the current *use* of bank money is increasing faster than its available supply, and the banks can ask, and get, a higher interest rate. But if deposits are rising faster (in percentage) than borrowings, then supply is gaining on use (or demand) and the banks, in order to keep their credit in active use, must lower the charge or interest rate.

It will be noticed at once that the main difference between this measure and the one used for bond prices (aside from turning supply and demand upside down) is the omission of government securities from the "demand" total. In the case of bonds, government securities must be included in "demand" for the simple reason that in many periods (such as acute depression) government borrowing

<sup>1</sup> If "required reserves" at the Federal Reserve banks are *subtracted* from deposits (as being money not available for general lending purposes) then every increase in "reserve requirements" will cause this measure to rise, indicating firmer rates in prospect. To calculate required reserves for *reporting* member banks only, however, is a fairly complicated process, and is recommended only to the trained statistician.

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largely *takes the place of private borrowing*, and so competes with other possible investment uses of bank credit. But—in practice—this competition does not seem to affect the rate on bank loans.

In other words, if it were not for the investment *demand* created by government borrowings in recent years, the prices for all other high-grade bonds (railroads, utilities, etc.) might easily have gone much higher than they did. But the “new” money created by these government borrowings soon found its way, through relief and other payments, into private hands. The government did the borrowing, but the public had the use of the funds, placed them back on deposit, and so created a still larger total of deposits *compared with private borrowing demands*.

In 1917 to 1920, on the other hand, *both* the government *and* the public were borrowing heavily at the banks, so that loans rose even more rapidly than total deposits. This was particularly due to the fact that the proceeds of part of the government borrowings, instead of being paid solely to Americans and remaining on deposit in American banks (as during the recent depression), were being re-loaned and transferred abroad. American banks held the loans and investments which had “created” the money, but part of the money itself disappeared into foreign bank deposits.

For this combination of reasons (simultaneous government and private borrowing, plus the shipment of newly created money abroad) loans in that period rose much faster than deposits, and *both* long- and short-term money rates rose spectacularly.

## SEVEN KINDS OF INFLATION

In recent times, both long- and short-term rates have declined together, *but the greatest decline was in short-term rates*, because government borrowings were *replacing* private borrowings, and thus keeping investment rates fairly high compared with short-term private loan rates.

This accounts in large measure for one of the outstanding phenomena of the depression period—a much more rapid and drastic decline in short-term interest rates than in investment rates. Not many people realize it, but this is an entirely new situation in our economic history since the Civil War. Long- and short-term rates have often moved in opposite directions, but short-term rates have never before (up to 1930) remained persistently and consistently far below investment rates for a period of several successive years.

Hitherto it was always possible for the investor who did not wish to “tie up” his money in long-term bonds, to shift his investment to bonds and notes due in a few months or years *without loss of income*. In 1899, for example, when the rate on high-grade bonds had dropped to about 3.25 per cent, the investor could have sold his bonds, realized his profits, and placed his funds at short-term use at an average of over 4 per cent. He would actually have *increased* his income on the operation (see Chart 5, page 85).

But in 1936, with bonds again yielding only 3.25 per cent, a similar investor wanting to sell his bonds and realize his profits would have had to ac-

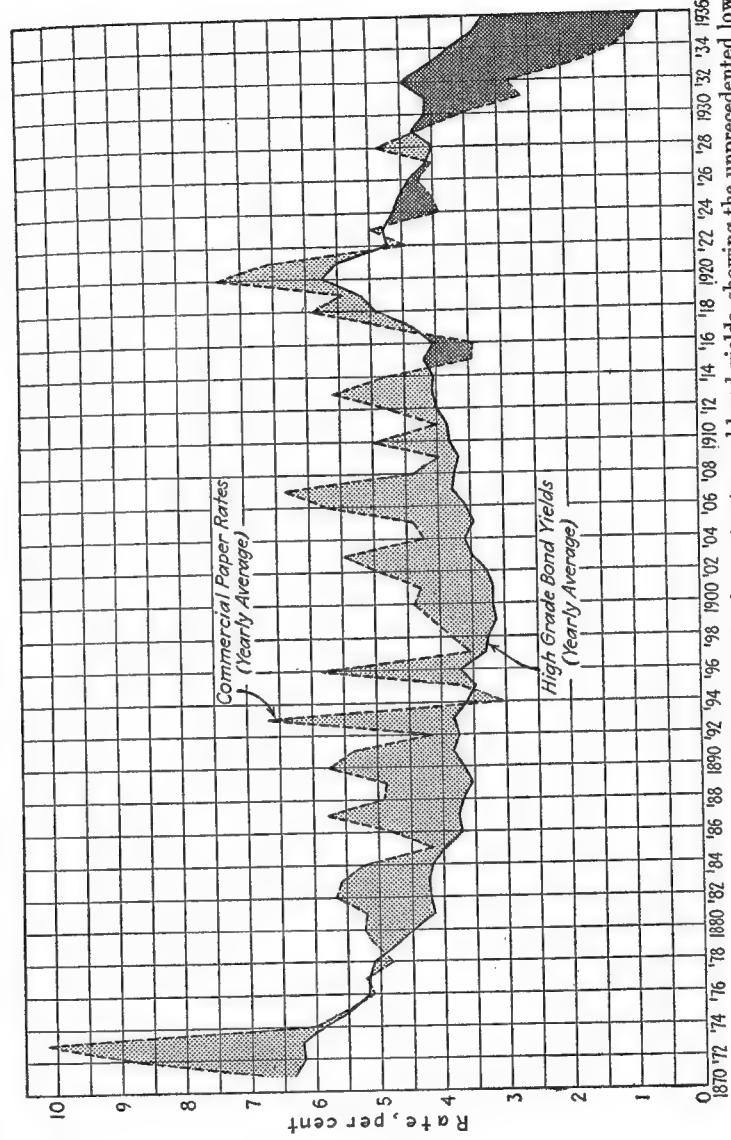


CHART 5.—A 65-year comparison between short-term interest rates and bond yields, showing the unprecedented low relative level of short-term rates since 1931.



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cept less than 1 per cent on short-term investments due in a year or less.

Hence the ability of the investor to measure the influences affecting short-term interest rates is highly important to any investment plans he may want to make.

But this is only one reason for using such a measure. As we shall see later on, short-term rates also affect the market price of equities (common stocks) and the ability of business concerns to finance expansion profitably. Needless to say, the interest of bankers in the short-term rate is paramount. It is the "price" they receive for one of their most important "commodities"—namely, commercial credit.

This leads us to the interest rate on that prime grade of short-term money known as bankers' acceptances. This rate fluctuates much more violently than does the general bank loan rate. Whereas, for instance, the bank loan rate (as charted on page 80—Chart 4a) varied from a high of 7 per cent in 1920 to a low of about 3.40 per cent in 1936, the bankers' acceptance rate declined from 6.25 per cent in 1920 to only  $\frac{1}{8}$  of 1 per cent in 1936. Short-term bonds in recent years have followed this acceptance rate more nearly than the comparatively high general loan rate.

As an effective measure of influences on the bankers' acceptance rate, we must turn from member bank figures to the figures of the Federal Reserve banks themselves. As "bankers' banks," largely controlling *marginal* operations, the Reserve banks show many sensitive and extreme fluctua-

## INFLATION OF SHORT-TERM INTEREST RATES

tions that do not appear in the large "mass movements" of member bank funds.

Chart 4b, on page 8, shows the comparison between the bankers' acceptance rate and a fairly simple demand-supply measure drawn solely from Federal Reserve figures. The degree of close correspondence speaks for itself. But just what is this measure—and what is the logic behind it?

This measure uses for "demand" the commercial and other "bills" (i.e., short-term loan "paper") held by the Federal Reserve banks. These "bills" are acquired either by purchase in the open "bill market" or through "rediscount" (relending) for the benefit of member banks themselves.

On the "supply" side, this measure uses total deposits at the Federal Reserve plus the added liabilities of the Reserve in the form of Federal Reserve notes outstanding.

The logic behind this is simple. Both the deposits and the notes (on the "supply" side) represent credit resources in the hands of the member banks and the public lumped together. The notes are the equivalent of added deposits in negotiable form. If returned to the Federal, they would increase its deposits, dollar for dollar, as returned.

The "bills" held (on the "demand" side) represent the *use* being made of Federal Reserve lending facilities and also show the percentage of total Federal Reserve deposits which have been "created" by Reserve loans, directly or indirectly.

Thus the balance between supply and demand largely determines the rate of interest it is possible

## SEVEN KINDS OF INFLATION

to charge on "bills"—of which bankers' acceptances are the highest grade used by the public and commerce at large.

When Federal Reserve deposits are swelled by some other means than "bills" bought or rediscounted (e.g., by the Federal's purchase of government bonds and notes), then supply mounts much more rapidly than demand, and sensitive interest rates are apt to decline. The reverse happens (as in 1919 and 1920) when a large proportion of Reserve deposits are created by "bill" loans.

In ordinary times this second measure is perhaps more important to the banker than to the general public—but since, in recent times, the going rate on short-term bonds, and especially on short-term United States government notes, has so closely followed the "disappearing" bankers' acceptance rate, this measure has acquired a wholly new importance for the general investor. His dilemma—arising from inability to shift into short-term investments without heavy income loss—shows up graphically in this very demand-supply measure.<sup>1</sup>

This brings us to the end of our general discussion of bond prices and interest rates and of ways to

<sup>1</sup> Unfortunately when—as happened in 1936—"bills held" by the Federal almost disappear, this measure may show no sign of rising until long after member banks have increased their "loan to deposit" ratio. At such rare times the layman should look to the member bank measure for first hints of rising short-term rates. For a brief discussion of some of the effects of "increased reserve requirements," see the closing paragraph of this chapter under *The Arithmetic of the Measures*.

#### INFLATION OF SHORT-TERM INTEREST RATES

measure the forces at work to inflate or deflate one or the other. But I do not want to leave this subject without making one point abundantly clear: namely, that the banking figures merely serve to measure immediate conditions which often have their ultimate cause in far more profound undercurrents and trends. Some of these are discussed in later chapters on "relative" inflations and especially on general debt inflation—the simple state of being "overextended" as a nation in relation to our resources. Others have to do with the whole nature of debt in a State that is supposed to rest on ownership or "equity" capitalism, and are also discussed briefly in the final chapter.

But the average person discovers his keenest interest in those facts and trends which concern his immediate daily life and plans—how he shall conduct his business, or how he shall invest his money, or whether or not we are entering that type of inflation which might prove harmful to the investments of institutions in which he has a stake. For these day-to-day purposes, the story revealed by the weekly banking figures is incomparably better than the conflicting guesses and opinions of experts that have plagued us of recent years. The banking story substitutes fact for fancy, measurement for guesswork, logic for emotion. As I have said before, the science of interpreting bank figures to measure the economic condition of the country is comparatively new—as new as the change in the needle that first made the sewing machine pos-

## SEVEN KINDS OF INFLATION

sible—but the principles back of this new science, like the law of supply and demand, date back to the earliest common sense of the race.

### *The Arithmetic of the Measures*

#### *A. The Ratio of Total Loans to Deposits.*

For convenience of illustration, we can use the same member bank report (as of Oct. 28, 1936,—reproduced on page 73) which we used for the bond price measure.<sup>1</sup>

For "demand," we subtract from item 1 the total of securities in items 8, 9, and 10, leaving \$8.721 billion.

For "supply," we add up items 14, 15, 17a, and 17b (thus omitting United States government deposits), which gives us a total of \$26.913 billion.

To get our ratio, we divide "demand" by "supply" as follows:

$$\begin{array}{rcl} \text{October, 1936, demand} & \$8.721 & \\ \text{Divided by October, 1936, supply } 26.913 & = & .324 \text{ or } 32.4 \text{ per cent} \end{array}$$

To measure the change in trend since October, 1935, we simply *subtract* from 1936 figures all the *gains* for the year shown in the right-hand column and *add* all the *losses*. This gives us demand for October, 1935, as \$7.902 billion, and supply as \$24.094 billion. Then our ratio becomes:

$$\begin{array}{rcl} \text{October, 1935, demand} & \$7.902 & \\ \text{Divided by October, 1935, supply } 24.094 & = & .328 \text{ or } 32.8 \text{ per cent} \end{array}$$

In short, the trend over a year had declined slightly from 32.8 to 32.4 per cent, thus giving no indication of an immediate basis for rising bank loan rates—in spite of a considerable increase in loans over the year. (In later months, however, this trend changed.)

#### *B. The Ratio of Federal Reserve Bills Held to Federal Reserve Deposits Plus Notes.*

To get these figures we have to turn to the *second part* of the Reserve bank report instead of to the introductory summary reproduced on page 75. For illustration, however, we can still use the report as of Oct. 28, 1936. Part two of this report appeared in Friday newspapers of Oct. 30 as follows (except for left-hand numbers):

<sup>1</sup> For recent changes in report form, see page 143.



# INFLATION OF SHORT-TERM INTEREST RATES

## ASSETS AND LIABILITIES OF THE TWELVE FEDERAL RESERVE BANKS COMBINED

(In thousands of dollars)

|                                                                                           | Oct. 28<br>1936 | Oct. 21<br>1936 | Oct. 30<br>1935 |
|-------------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|
| <b>ASSETS</b>                                                                             |                 |                 |                 |
| 1. Gold certificates on hand and due from U. S. Treasury.....                             | 8,635,831       | 8,609,328       | 7,026,623       |
| 2. Redemption fund—Federal Reserve notes....                                              | 12,273          | 12,471          | 19,727          |
| 3. Other cash.....                                                                        | 265,825         | 253,547         | 238,953         |
| 4. Total Reserves.....                                                                    | 8,913,929       | 8,875,346       | 7,285,303       |
| 5. Bills discounted:                                                                      |                 |                 |                 |
| (a) Secured by U. S. government obligations, direct or fully guaranteed.....              | 3,421           | 3,103           | 2,999           |
| (b) Other bills discounted.....                                                           | 2,686           | 3,067           | 3,129           |
| 6. Total bills discounted.....                                                            | 6,107           | 6,170           | 6,128           |
| 7. Bills bought in open market.....                                                       | 3,087           | 3,089           | 4,676           |
| 8. Industrial advances.....                                                               | 26,299          | 26,427          | 32,719          |
| 9. U. S. government securities:                                                           |                 |                 |                 |
| (a) Bonds.....                                                                            | 378,077         | 378,077         | 238,923         |
| (b) Treasury notes.....                                                                   | 1,443,363       | 1,443,363       | 1,635,087       |
| (c) Treasury bills.....                                                                   | 608,787         | 608,787         | 556,162         |
| 10. Total U. S. government securities.....                                                | 2,430,227       | 2,430,227       | 2,430,172       |
| 11. Other securities.....                                                                 |                 |                 | 181             |
| 12. Total bills and securities.....                                                       | 2,465,720       | 2,465,913       | 2,473,876       |
| 13. Due from foreign banks.....                                                           | 220             | 218             | 641             |
| 14. Federal Reserve notes of other banks.....                                             | 24,720          | 24,797          | 21,447          |
| 15. Uncollected items.....                                                                | 573,806         | 654,301         | 507,936         |
| 16. Bank premises.....                                                                    | 48,062          | 48,062          | 50,169          |
| 17. All other assets.....                                                                 | 39,116          | 38,307          | 41,932          |
| Total assets.....                                                                         | 12,065,573      | 12,106,944      | 10,381,304      |
| <b>LIABILITIES</b>                                                                        |                 |                 |                 |
| 18. Federal Reserve notes in actual circulation..                                         | 4,086,242       | 4,091,064       | 3,511,319       |
| 19. Deposits:                                                                             |                 |                 |                 |
| (a) Member bank—reserve account.....                                                      | 6,732,003       | 6,693,447       | 5,652,989       |
| (b) U. S. Treasurer—general account.....                                                  | 99,903          | 88,337          | 60,279          |
| (c) Foreign bank.....                                                                     | 65,479          | 63,782          | 25,402          |
| (d) Other deposits.....                                                                   | 154,170         | 163,492         | 270,744         |
| 20. Total deposits.....                                                                   | 7,051,555       | 7,009,058       | 6,009,414       |
| 21. Deferred availability items.....                                                      | 577,408         | 657,033         | 508,913         |
| 22. Capital paid in.....                                                                  | 130,241         | 130,243         | 130,356         |
| 23. Surplus (Section 7).....                                                              | 145,501         | 145,501         | 144,893         |
| 24. Surplus (Section 13b).....                                                            | 27,088          | 27,088          | 23,457          |
| 25. Reserve for contingencies.....                                                        | 34,236          | 34,236          | 30,698          |
| 26. All other liabilities.....                                                            | 13,302          | 12,721          | 22,254          |
| Total liabilities.....                                                                    | 12,065,573      | 12,106,944      | 10,381,304      |
| 27. Ratio of total reserves to deposit and Federal Reserve note liabilities combined..... | 80.0%           | 80.0%           | 76.5%           |
| 28. Commitments to make industrial advances..                                             | 22,790          | 22,774          | 27,057          |

## SEVEN KINDS OF INFLATION

In this case, we select for "demand" the almost negligible items 6 and 7 under "assets" totaling only \$0.009 billion. (In many years of active business the total of these two items has been very substantial.)

For "supply" we select the total of items 18 and 20 under "Liabilities." In this case, they aggregate \$11.137 billion. Then our ratio works out:

$$\begin{array}{l} \text{October, 1936, demand} \quad \$0.009 \\ \text{Divided by October, 1936, supply } 11.137 = .0008 \text{ or } 0.08 \text{ per cent} \end{array}$$

For all practical purposes, this ratio is almost *nil*—but so was the bankers' acceptance rate at that time; namely,  $\frac{1}{4}$  of 1 per cent!

A glance at the right-hand column (figures for Oct. 30, 1935) will show that "bills" were only \$1 million higher in 1935, but that deposits plus notes aggregated \$9.520 billion. Thus:

$$\begin{array}{l} \text{October, 1935, demand} \quad \$0.010 \\ \text{Divided by October, 1935, supply } 9.520 = .00105 \text{ or } 0.105 \text{ per cent} \end{array}$$

Thus (if possible!) the October, 1936, ratio called for even easier bankers' acceptance rates than did the ratio for October, 1935. But, as explained in the footnote on page 88, at times when the Federal holds practically no "bills" and member banks are not resorting to rediscount, forces may be at work to raise short-term rates (even on bankers' acceptances) without being reflected in Federal Reserve figures. At such times, and until the Federal again becomes active in the bill market or in rediscounting, the member bank measure of loans to deposits is the best guide to an underlying change of trend. This was the case in the closing months of 1936 and the early weeks of 1937.

At this time, also, the announced changes in "reserve requirements" obviously brought much closer the day when member banks would be forced to borrow at the Federal in order to maintain minimum reserve balances. That, in itself, would tighten short-term money rates in anticipation; and, by "immobilizing" part of the deposit funds of member banks, increased reserves would also effect higher rates even before "rediscounts" were necessary.

## CHAPTER VII

### *Inflation of Equity (Stock) Prices*



MORE zeal and energy, more fanatical hope and more intense anguish have been expended over the past century in efforts to "forecast" the stock market than in almost any other single line of human action. I must repeat at the outset, therefore, that this part of our discussion of inflationary forces makes no effort whatsoever to provide a "forecasting" formula for stock movements.

As in the case of our discussion of bonds, we are seeking one thing only—a method of determining from the measurement of published facts whether the combined events of *today* are of a nature to inflate or deflate stock prices, and with them the dollar value of all ownership claims, whether represented in corporate stocks traded on some market or merely in the ownership rights of individuals or partnerships.

The stock markets may or may not respond to economic facts. A dozen unexpected events may intervene between underlying conditions and the

## SEVEN KINDS OF INFLATION

price people are willing to pay for certificates of ownership, and thus make "forecasting" both futile and tragic. But it is still a matter of great consequence to know in which direction the major economic forces are working. That is the sole objective of the present part of this book.

In the broadest sense, there is little mystery to rising or falling prices for stocks.<sup>1</sup> A stock that is "earning" \$5 a share is likely to sell for a much higher price than a stock earning only \$1 per share. So, too, if we expect a stock that has been earning only \$1 per share to earn \$5 next year, we are willing to pay much more for it than if we expected it to earn no more than \$1 per share for an indefinite period. In similar fashion, the prospect of declining earnings usually brings about a fall in the price of any stock. But there is another important influence at work in addition to prospective earnings, and that is the "going interest rate." This is where stock markets and bond markets are invisibly tied together. The point—and it is a much more important one than many people realize—can be illustrated as follows:

Suppose the stock of the B Company is currently earning \$5 a share, and paying an annual dividend of \$4. The expectations are that next year this stock will earn slightly over \$6 a share and pay a dividend of \$5. How much is the stock worth to an investor?

<sup>1</sup> Hereafter the word "stock" is taken to include the value of all ownership claims. The trend of the stock market roughly represents the trend of all ownership values; hence, "stock" and "stock market" are convenient short expressions for a much broader economic concept.

#### INFLATION OF EQUITY (STOCK) PRICES

To make the matter simpler, suppose we omit all question of the stability of the company and the excellence of its management, and merely assume all these factors to be of the highest investment quality. In that case the price which the investor is willing to pay for the stock will depend on what percentage income he is anxious to get on his investment.

If he pays \$100 a share, then the present dividend of \$5 will mean a 4 per cent return on his investment. But if he is considering next year's dividend rather than this year's, then he might be willing to pay \$125 a share—because a dividend of \$5 next year would mean a return of the desired 4 per cent on \$125.

In other words, if the investor is satisfied with a 4 per cent return on his money, either now or in the near future, he is willing to pay twenty-five times the present or anticipated dividend. (If he is buying the stock only to hold it for an expected "market profit," he may figure somewhat differently. He might buy a stock which showed no promise of any dividend at all this year or next, but expect to get the equivalent of a dividend in his market profit at a near-by later date. But the majority of people buy stocks for investment income, present or future, and it is astonishing, in the long perspective, how closely any given stock will remain within a price range governed by the income it is producing or likely to produce for the straight investor.)

This is where the "going interest rate" looms largely in stock market prices. Suppose for a



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moment that a 4 per cent return seems too low to the average investor, that he can buy highest grade bonds at a return of 5 per cent or better, and that owing to a developing shortage in investment money supply (similar to that discussed in the chapters on bond prices) he wants every investment dollar to work for him to the greatest possible income advantage. In that case he would probably refuse to pay more than \$100 a share for a stock about to pay a \$5 dividend. He would want 5 per cent on his money.

Or, if we assume a reverse set of conditions, when money invested in best grade bonds would bring a return of only 3 per cent, then the investor might be satisfied with a  $3\frac{1}{2}$  per cent return on his stock. In that event he might be willing to pay over \$142 a share for a stock expected to pay a \$5 dividend—because \$5 would be  $3\frac{1}{2}$  per cent of \$142.86.

Thus, there are times when stocks might fluctuate in price for exactly the same reason that bonds do, without any prospective change in earnings or dividends, and simply because changing conditions of money supply force the investor to seek a higher or accept a lower return on his investment dollars.

Then there is a third major influence at work on the general level of stock prices: the purchasing power of money in both domestic and foreign markets. In other words, far back in the investor's head is always the question: "What would the dollar value of my stocks buy for me if I were to exchange them for wheat or corn or shoes, or for the purchase of ownership in foreign companies, or of

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the currency of some foreign country?" We do not live in splendid economic isolation. We trade with other countries and buy and sell their securities and commodities. Perhaps very few individual investors think in these terms, but the shrewdest and largest investors often do, and it is their buying and selling that often throws the balance toward higher or lower stock prices.

Hence the value of the domestic dollar in the world markets and in terms of foreign currencies, as well as in the home market, plays a distinct part in influencing stock prices—that is, the current value of ownership. It is really a case of water seeking its own level, a subtle process of barter and exchange, by which the value of a factory (represented in the stock of the company owning the factory) tends to adjust itself up or down to the value of wheat or German real estate or the British pound or a great group of aggregate commodities. In other words, the "inflation" or "deflation" of the American dollar itself—its changing purchasing power in terms of a multitude of things other than stocks themselves (often reflected in its gold backing)—may tend to raise or lower American stock prices even with no visible change in earning power and no visible change in the going rate of investment return.<sup>1</sup>

The trouble is that most of us are always seeking an exaggerated simplicity in our explanations of stock market action—as in our explanations of many

<sup>1</sup> For further discussion of gold and monetary "inflation" see Chapter IX, pages 157-159.

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other things. We are always looking for "the chief cause" for this or that spectacular happening. If it is an astonishing election result, we are never satisfied until we have discovered some *one* reason for it—that it was a "bought election," or a "revolt of the masses," or a "world-wide sweep toward dictatorship," or the "amazing personal popularity" of the candidate, or something equally absurd. We are unwilling to go through the mild discipline of trying to analyze a group of major forces and their interaction.

We find stock market experts who tell us that "earnings are everything," others who tell us that even earnings will not count "if we have runaway inflation of the dollar," and still others (somewhat fewer in number, be it said) who tell us that stocks go up "when money supply is plentiful" and go down "when money grows scarce." We find amazingly few who are willing and anxious to weigh *all* these considerations in the balance and to admit, for example, that a violent increase in earnings *might wholly offset* both a growing shortage of money and a declining price level, or that an actual decrease in earnings might be offset entirely by a combined rise in money supply and an inflation of the monetary unit. Yet the whole history of the stock market is nothing if not a history of just such surprising "offsets" and a complete refutation of the "chief cause" thinkers.

Without going too far back for convenient memory, it is highly useful, before discussing measuring methods, to take a look at the stock market

#### INFLATION OF EQUITY (STOCK) PRICES

record since 1919 in terms of these "offsetting" forces which we have discussed. Suppose we take first the period from October, 1919, to August, 1921, and see how our three major forces were interacting or "offsetting" each other. In this period the stock market was in a heavy "bear" trend after a sustained postwar rise. The "break" occurred in October, 1919, and except for minor rallies did not come to a final turning point until August, 1921. In that period, what was happening to "inflation," to "money supply," and to "earnings"?

As to "inflation"—commodity prices continued to rise steeply from October, 1919, right through to June, 1920. Currency in circulation rose rapidly compared with national gold reserves backing that currency. By September, 1920, there was less than 49 cents in gold back of every dollar of currency. But stock prices continued down, right in the face of both these evidences of growing "inflation." In other words, anyone who had bought stocks in late 1919 as an "inflation hedge" would have been grimly disappointed. His stocks would have dropped almost as fast as the prices of all commodities rose. Clearly something was heavily "offsetting" the theoretical influence of a price inflation on stocks. (A mild historical warning, incidentally, to those who bought stocks on the inflation theory early in 1934, only to have stocks decline for nearly a year!)

What of "money supply" in this period? A glance at Chart 6b will show that money supply, compared with demand, declined during the entire period to October, 1920, reaching record low ground. Meas-

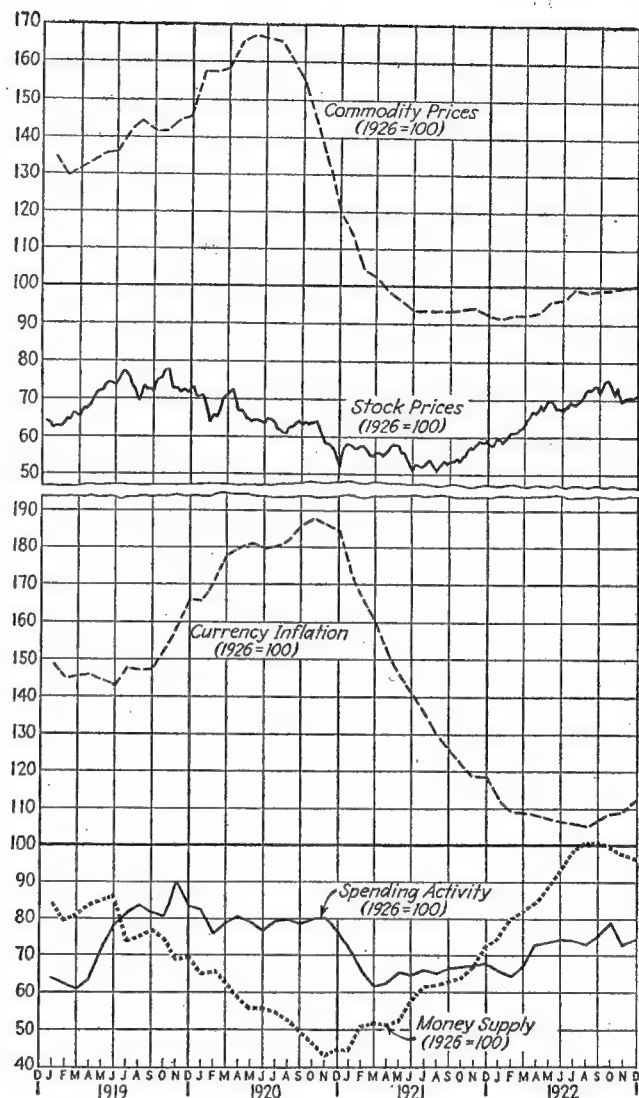


CHART 6.—Offsetting trends of spending activity, money supply and currency inflation in the postwar period of 1919-1922.



### INFLATION OF EQUITY (STOCK) PRICES

ured in the simple ways already discussed, anyone could have seen at the time that forces were at work to lower bond prices and raise interest rates. This, in turn, would have given investors every motive to seek a higher income return on their stock investments; in other words, to be willing to buy stocks only at lower and lower prices. Clearly, then, from October, 1919, to the latter part of 1920 disappearing money supply was a powerful offsetting influence to the continuing general price and currency inflation.

And what of "earnings"? The rising costs of raw materials were making it more and more difficult for industrial concerns to continue their postwar margins of profit. Added to this, the public was beginning to rebel at a rising cost of living, and to go on a so-called "buyers' strike." All in all, there was no reasonable prospect of largely increased earnings under such conditions. If anything, the outlook was for smaller earnings. Thus, the man who was willing to pay \$100 a share for a \$4 dividend stock in 1919 had good reason to be unwilling to pay the same price when the chances favored no increase and a possible decrease in the dividend, and when rising interest rates were compelling him to seek a 5 per cent instead of a 4 per cent return.

Thus a palpable "inflation" trend was heavily enough offset, in late 1919 and the first half of 1920, by uncertain earnings outlook and lowering money supply to bring about a disastrous decline in stock prices. During the balance of the period—up to August, 1921—what was happening?

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First of all, a general and violent price "deflation" set in. Commodity prices dropped about 40 per cent in less than a year. Not only that, but they continued to decline long after the major upturn in the stock market in August, 1921. Commodities continued their decline right into the middle of 1922. Thus, all those "single cause" thinkers who buy stocks on rising commodity prices, and sell them on lowering commodity prices, would have had no cause to suspect an approaching upturn in the summer of 1921. But since stocks did turn up on a permanent trend in August, what were the offsetting influences?

Another glance at the chart on page 100 will show at once that the money shortage of 1920 began to correct itself in the late fall of 1920. By midsummer of 1921, the improvement was almost sensational. Some bond prices were lower in 1921 than in 1920, but several important groups of bonds had been improving in price during the whole first half of 1921, and certainly short-term interest rates had declined violently. Therefore, the investor had begun to have a motive for buying stocks on a lower income return than in 1920. Enlarging money supply in this case was just as clear an offset to the continuing price deflation as shrinking money supply was to the continuing price inflation of 1920.

The earnings trend of major industrial concerns was still highly doubtful in the summer of 1921. But at least the obstacle of high-cost raw materials had been largely removed, and the rate of public spending activity (which will be fully dis-

### INFLATION OF EQUITY (STOCK) PRICES

cussed later on) had begun to increase. This was at least a reasonable forerunner of improved state of the public mind. Probably the best that could be said at the time was that any further decrease in earnings seemed unlikely. The depression had been sharp but short, and such items as the postwar housing shortage, and improved foreign outlook, gave substantial hope against further declines in activity.

Of the three major forces at work, then, just prior to August, 1921, the dominant force to raise the investment price of stocks was plainly the recovery from an acute money shortage and the restoration of a normal supply. The earnings trend was at best neutral; and the trend of commodity prices was still deflationary. But the money supply increase proved sufficient to turn the tide. It was the all-powerful offset in the summer of 1921.

Unfortunately for our common sense in a later crisis, the important role played by increasing money supply in 1921 led many of the "single cause" thinkers to expect an exact repetition of these events in 1930 and 1931. They forgot—as we are all apt to forget—that whenever three or more major forces are constantly at work, the possible combinations are almost innumerable, that what might be a most effective offset under one combination would be wholly ineffective under another. The rising money supply and bond prices of 1921 did herald a general business recovery; but the rising bond prices of 1930 and early 1931 did not. As we shall see later on, the facts were available to account for the fail-

#### SEVEN KINDS OF INFLATION

ure—available and easy to measure. But the “single cause” experts simply ignored them.

The second good period for illustrating the effects of offsets on stock prices was the culmination of the stock market boom in 1927 to 1929.

Taking first the year 1927, during which stock prices rose steadily, we find (a) a well-sustained and rising money supply, (b) a strong surge of public spending activity, in spite of a decline in actual manufacturing output, and (c) a neutral position in monetary inflation, with level commodity prices. The public buying activity presaged reasonable earnings. Rising money supply and rising bond prices tended to lower the income return demanded by stock investors, and therefore to raise stock prices.

In 1928 we find (a) a visibly declining money supply, accompanied by mildly declining bond prices, but (b) a terrific upsurge in public spending activity with a renewed uptrend in manufacturing output, indicating far better earnings ahead, and (c) a rising inflation of our monetary system, unaccompanied, however, by any marked increase in commodity prices.

In this year, the declining money supply was a warning signal that all was not right. Nevertheless, it was completely offset by the tidal wave of public spending and increased industrial activity, both indicating higher and higher corporate earnings. The growing monetary inflation (a large increase of bank deposits and also of circulating currency compared to our national gold reserves) was also a

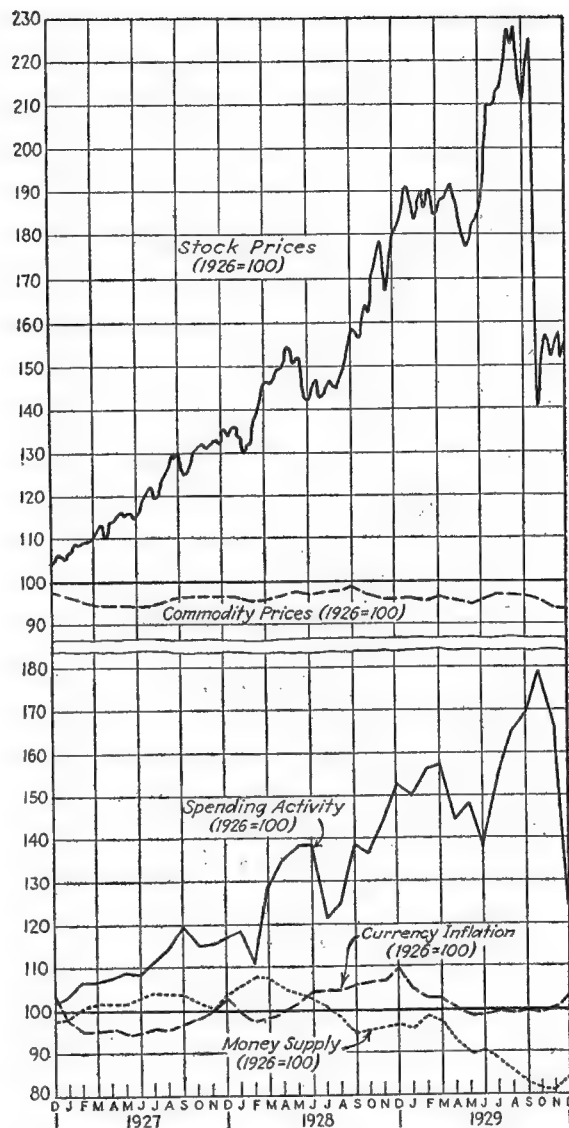


CHART 7.—Offsetting trends of spending activity, money supply and currency inflation during the boom years of 1927–1929.



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warning, but served as a temporary stimulant to stock prices and business activity.

In 1929—up to March—the trends of 1928 continued. Then several things happened at once. First, the rate of decrease of money supply began to accelerate and, naturally enough, the decline in bond prices became more abrupt, also the rise in short-term interest rates. This gave the stock investor a motive to seek a higher income return. His only hope of this lay in increased earnings and larger dividends. But from March to June an abrupt and unseasonal decline in public spending activity set in. The intricate causes for this do not concern us. We are interested only in the fact. The simple fact was that public spending, on which corporate earnings depended, was not continuing its upsurge of 1927 and 1928. Instead, it was declining in rather spectacular fashion. Then a third reversal of form took shape. Our monetary structure began to “deflate,” accompanied by signs of weakening in the commodity price structure.

In the third quarter of 1929, spending activity turned upward again; but most of the upturn was in financial operations, as shown by the fact that New York spending rose more rapidly than spending elsewhere. The offsets to this spending recovery became more and more violent in declining money supply and bond prices and in further deflation of our monetary system. Taking all things into account, we never again reached anything approaching the peak of upward forces at work in March of 1929—and we had had the warning of the

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terrific slump of combined forces from March to June.

By September of 1929 the investor, watching the combined influences at work, knew (a) that he should be receiving a higher income return on stocks, (b) that the erratic course of spending activity outside of New York made increased dividends unlikely, and (c) that we were threatened with deflationary forces in the commodity price structure.

Did this combination of events enter directly into his thinking? No one knows. The "psychology" of the 1929 catastrophe is relatively unimportant. What does concern us is that measurable economic facts fully justified the market declines of the late fall. What is perhaps the most interesting point of all is this: all the salient facts could have been measured solely by the use of the weekly banking figures published in every important newspaper of the land.

What, then, of the closing months of 1929 and the spring of 1930? Hope was swinging high in the spring of 1930—hope that the market crash of 1929 was nothing more than a violent correction of wild speculation; hope that a program of spending and construction by large industrial groups, sponsored by the government authorities, would offset the sudden curtailment of activity inspired by the withering stock market; hope that a new rising trend in equity values (stock prices) accompanied by rising bond prices would usher in a "constructive" period.

Ever since the Civil War the correction of a money shortage had been followed within a few

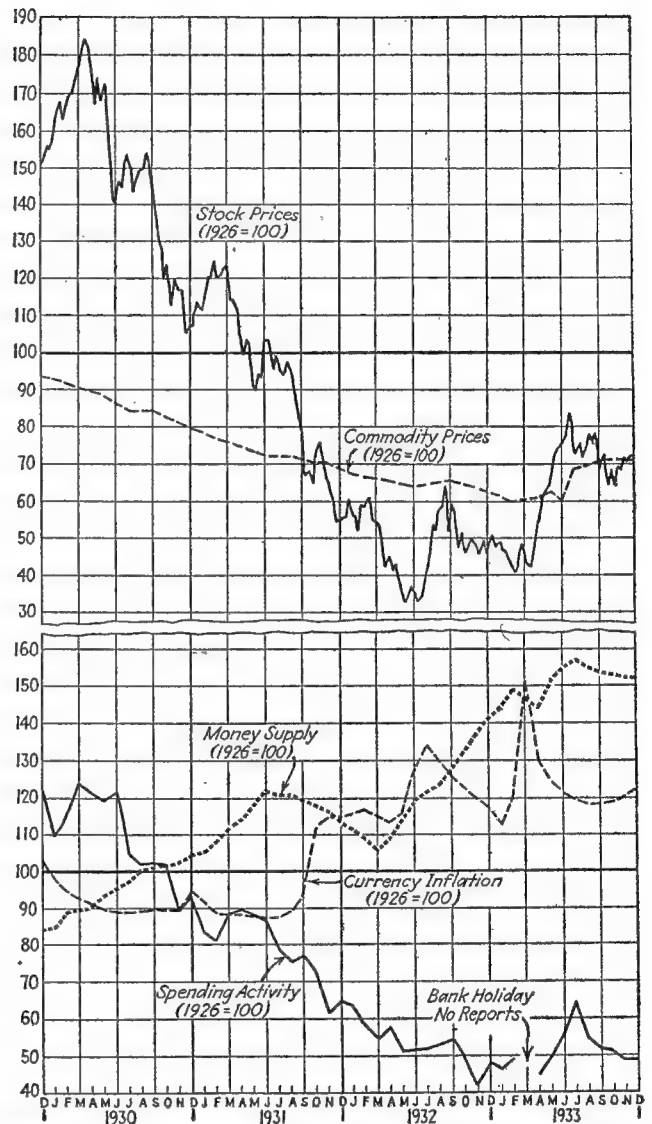


CHART 8.—Offsetting trends of spending activity, money supply and currency inflation over the turning point of the depression.

## INFLATION OF EQUITY (STOCK) PRICES

months either by gradual stabilization or by actual business improvement. With that fact in mind, the public, the administration and businessmen at large had good grounds for thinking that 1930, or at the latest 1931, would bring a resumption of normal activity. But, as we know, these hopes were soon lacerated and then torn to bits by successive waves of deeper and deeper decline right into 1932. What was it that was offsetting the classic and benign influence of improving money supply?

It was—and very pointedly—the unexpected continued decline in national spending activity, as shown in the weekly “debits” reports (totals of weekly checks drawn) and later confirmed in the earnings and production reports of corporations.<sup>1</sup> At the very time that the stock market was rallying briskly in the spring of 1930, weekly spending activity was plunging headlong to new depths. Nor was the plunge arrested, except for brief and ineffective periods, until well on in 1932. For the first time since the Civil War, spending refused to respond to improved conditions of money supply.

With all the advantages of hindsight, we can estimate some of the causes for this unexpected phenomenon—such as the curtailment of new buying due to the crushing load of installment payments on former purchases, the backfire of world-wide condi-

<sup>1</sup> It was not until the latter half of 1930 that I became fully aware of the *possibility* that spending activity could continue down indefinitely (and contrary to all historical “patterns” since the Civil War) long after money supply had corrected a condition of acute shortage. Having no desire to sail under false colors through benefit of hindsight, I wish to put this clearly on record.

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tions on our domestic affairs, and the exceptionally high total of debt compared to our tangible national wealth,<sup>1</sup> all more or less "new" conditions not present in the same degree in our earlier economic experience.

But hindsight thinking has no place in the average man's problem in the midst of a crisis. It may help him in planning for a wiser future, but it does him no good today. The point to be emphasized again is this: the weekly banking figures faithfully told the current story of what was happening, regardless of remote causes and conflicting theories of "why."

They said, in effect: "Never mind the whys and wherefores, but simply accept the facts! Month by month, except for little futile spurts, the people are spending less and less—and more and more of the little they do spend is spent in paying off old loans. How can business and earnings possibly improve under such conditions? What difference does it make how large the money supply may be if the people refuse to use it? Forget your theories of what they ought to do, and swallow the facts of what they are actually doing!"

Not until 1932 did the downsweep in spending activity begin to halt its pace. Even in 1932 the low ebb of spending was not reached until November; but something approaching a flat trend began to develop about March. At about the same time money supply, which again had been sharply curtailed by the British crisis in late 1931, began a

<sup>1</sup> See Chapter XI, "Decades of Debt."



#### INFLATION OF EQUITY (STOCK) PRICES

vigorous uptrend, and continued hoarding began to bring a distinct inflation of the American currency. The leveling off of the spending decline, combined with improved money resources and an inflationary trend in the currency, gave some hope that "bottom" might have been reached at last.

By midsummer of 1932 the facts revealed in the banking figures since March had begun to work like a leaven on public opinion. From June to September of that year the public behaved as if an "armistice" had been declared. The stock market had its wildest rise (figured in percentage) in many long decades. But without a real upturn in public spending as a base for better business earnings this armistice enthusiasm was bound to peter out. It did. The vague terrors of the approaching bank holiday added their force. By March of 1933, most of the market gains of the summer of 1932 had been wiped out.

Yet the basic spending activity of the public had at last turned upward after November, 1932; and after March, 1933, both spending activity and money supply began to follow the same upward course—an irregular and at times uncertain course, but one that the weekly banking figures reported steadily and convincingly for the benefit of everyone who could read and write and do a little simple arithmetic. The basic trend in two major forces had changed!

Once more let me emphasize, and with all possible seriousness, that I have simply used the stock market's course as a symbol or sign of much broader

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conditions. For months on end the stock market may move in response to a complex of so-called "technical" conditions and of public "psychology" which the banking figures would not justify. But in the broadest possible sense, and as representing the state of hundreds of small private businesses, the long-term trend of the stock market does appear to be a faithful barometer. It does seem to register—given enough time—the combined or offsetting effects of spending and earnings trends, of inflationary stimuli, and of basic money supply. These are simple broad factors which the weekly banking figures can and do tell us about. The next chapter will show how.

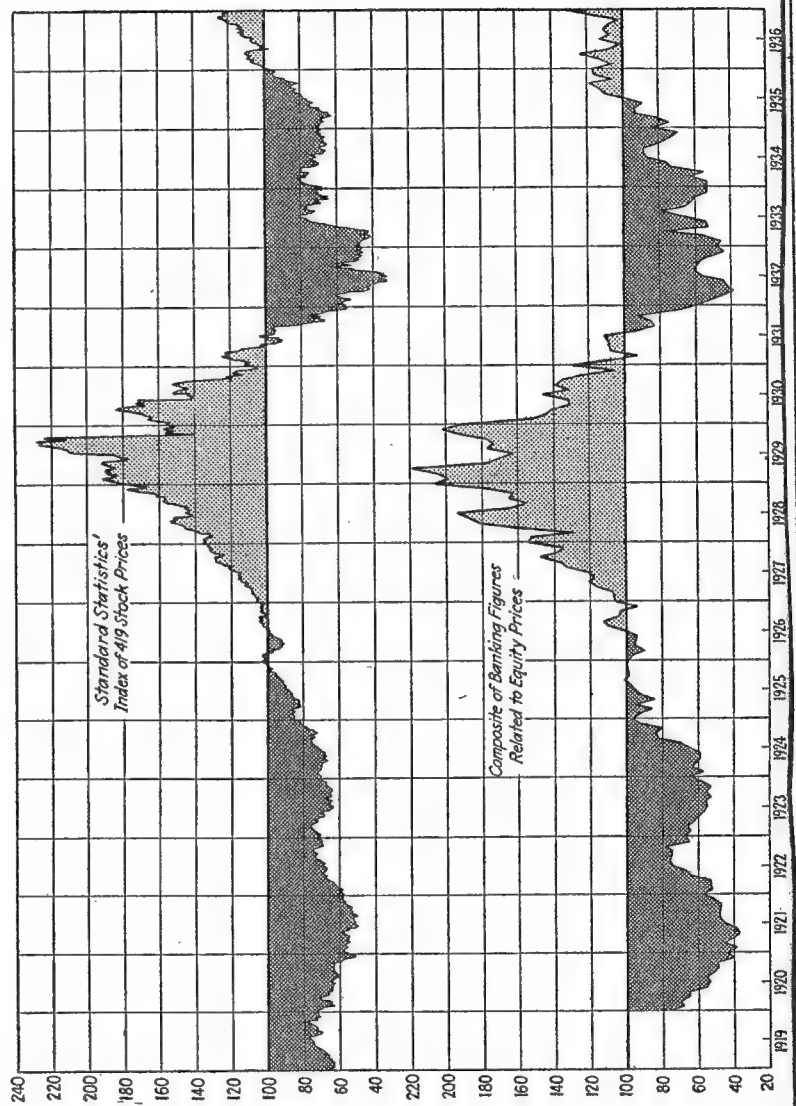
## CHAPTER VIII

### *Measuring Equity Price Inflation*



THIS chapter were much better never written if it will lead even one person to think that he can "forecast" the next move of the stock market from a simple use of the weekly banking figures.

To make this statement all the more emphatic and graphic, special attention is called to Chart 9, which shows the result of years of intensive study in combining or "correlating" various forces measured by banking figures. Right above the so-called banking composite, there is a chart of the stock market itself. At first glance, the charts of the banking composite and of the stock market look very much alike. Even more striking is the fact that the banking composite frequently shows important changes of trend several months ahead of the changes in the stock market itself—notably in the summer of 1921, in March of 1929, and again in March of 1932. But to dissuade anyone from attempting to compile or use such a composite as a



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market "forecaster," let me point out some of the glaring discrepancies.

Note, for example, that the banking composite declined during the latter half of 1926. The stock market had no such decline, either in the second half of 1926 or later in the spring of 1927. Anyone who sold his stocks in view of this decline in the banking composite would have been forced to buy them back at much higher prices.

Or note, again, the sharp rise in the banking composite during the summer of 1934, followed by an equally sharp decline in the fall. The stock market, instead of responding to this rise and fall, either immediately or within a few months, simply continued an irregular decline to the end of February, 1935. The stock market just ignored wholly and entirely both the up and the down movement in basic conditions indicated by the banking composite. It was not until the spring of 1935 that the stock market began its important rise. The chances are that anyone who bought stocks in midsummer of 1934 on the hope inspired by improving bank reports would have lost that hope entirely by early 1935, would have sold his stocks in utter discouragement and at a loss, and would have missed completely the improving price trends of 1935 and 1936.

Nevertheless, the banking figures did tell the truth about basic economic conditions—about the conditions affecting the plans of hundreds of small businesses in no way connected with the stock market. There was a decided improvement in earnings of many businesses in the summer of 1934,



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quite enough to justify any man in believing that we were still in an improving business trend, no matter how the stock market acted.

This, then, is the real purpose of using the banking figures. They can not pretend to measure the many complex forces at work in the stock market—the so-called “technical” position of stocks, the fears and prejudices and wild enthusiasms of leading and powerful speculators, nor the reaction to political trends and uncertainties. But they can tell us, to a surprising degree, what is happening to business at large, from the corner shopkeeper to the great distributing and manufacturing corporations.

Thus, only to the extent that the stock market may sooner or later take cognizance of what is actually happening can we say that there is any connection between the story told by the banks and that told by the stock market. In a broad sense—utterly useless to the stock market speculator—both the banking figures and the market are barometers of one and the same thing: the combined effect on equity or ownership values of the crisscross trends of activity, money supply, and inflationary influences in the money structure.

In brief, owners—whether of land, houses, small businesses, or stocks of large enterprises—are reasonably entitled to expect rising values for what they own when the banking figures reveal a combined improving trend. In a depression they are entitled to expect no serious betterment of their ownership values unless or until the banking figures show a distinct reversal of downward trends. Beyond this,

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any attempt to use the banking figures as a speculative guide is both futile and dangerously misleading.

With this renewed caution, suppose we consider concrete ways and means of measuring the three main forces at work in determining equity values.

The force of changing money supply has already been covered in our examination of bond price and interest rate inflation. The reason why money supply and interest rates exert a powerful influence on equity prices has been fully discussed in the preceding chapter. In general, the best measure to use is a ratio of "net" deposit balances in the member banks compared with total loans. "Net" balances show the amount depositors would have left if they paid off all their bank loans. Thus, if the banks showed \$15 billion in deposits (as they did in 1920) and bank loans of \$14 billion, then, after paying off the loans, the depositors would have found themselves with only \$1 billion of net balances as their equity, free and clear. (This ratio is analogous to figuring the "margin" in a brokerage account. It is the "margin" of American business.)

The use of this measure, for example, in 1919 and 1920, would have shown a money supply rapidly declining to the vanishing point. At the climax—in October, 1920—we would have had to divide the net balances of only \$1 billion by the loans of \$14 billion, giving a ratio of about .07—whereas in October, 1936, after dividing net balances of \$18.192 billion by total loans of only \$8.721 billion, we would have had an answer of over 2.08—an increase of some 2,714 per cent. Obviously, there is nothing

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like this per cent increase in stock prices over the period. But anyone using this measure as a rule of thumb could see for himself that high money supply in 1936 was quite as potent a factor in supporting high equity prices as the low money supply of late 1920 was in depressing equity prices.

Moreover, anyone during the period from January, 1928, to September, 1929, who saw this measure dropping heavily would have sensed that one of the important "supports" of the bull market (plentiful net funds) was being withdrawn at an alarming rate. A slight change in trend need not cause much alarm, especially if offset by greatly improved spending activity. But if, let us say, there should be a decline from the general level of 1936 (that is, from about 2.08) to something like 1.25 in a short period of a year or two, and with no great increase in spending activity as an offset, then the sensible thing to do would be to accept this as a strong cautionary signal.

This brings us to the second and all-important force of spending activity itself. How do we measure it? And in relation to what?

As we know, the Federal Reserve Board issues its bank debits report every week in time to be published in the Sunday morning papers. The report is divided into two sections. The first gives total debits (that is, the value of all checks debited or charged against deposit accounts during the week ending the previous Wednesday) for a constantly changing number of cities. For convenience, these are divided into groups, according to the

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Federal Reserve districts in which various cities happen to be. The second section of the report gives the total weekly debits in 141 "key" cities—and this series, fortunately, is continuous since 1919, so that direct comparisons can be made from year to year.<sup>1</sup>

But there are certain difficulties in drawing conclusions from weekly spending which the layman cannot avoid taking into account. For instance, holidays, when banks are closed, may fall in the forty-fifth calendar week one year and in the forty-sixth calendar week the following year. A week with only five business days will nearly always show a much lower total than a week with six business days. The Federal Reserve Board usually mentions the number of business days in each week reported. But the reader must watch closely for this point. Otherwise, he may get unduly alarmed or elated.

A second difficulty in reading weekly debits reports correctly is this: the weeks that include the first or the fifteenth of any month nearly always

<sup>1</sup> The newspapers also carry every week reports on "bank clearings." These are somewhat similar to debits, but not so reliable nor so inclusive. For example, when a manufacturer draws a check on his own bank and has it cashed there to meet his payroll, that check does not appear in "bank clearings." It would only appear in "bank clearings" if he drew it on one bank but had it cashed at another bank. But payroll checks, cashed at the banks on which they are drawn, do appear in "bank debits," because they are added to the debits total the minute they are charged against the manufacturers' deposit account. Since payroll increases are an important indication of improving business trends, the "debits" are thus a much more inclusive and helpful figure than "clearings." In a general way, however, when someone says that bank clearings are improving, the chances are that bank debits are also improving.

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show much higher debit totals than the in-between weeks. The reason for this is because so many business firms pay bills and parts of their payroll on the first and fifteenth of the month. There is often a difference of as much as a billion dollars between weeks that include the first and fifteenth and those that do not.

Because of these two points, the layman is on far safer ground, and subject to fewer heart attacks, if he waits for the monthly report of the Federal Reserve Board. This usually appears in the newspapers on the second Wednesday of every month for 141 cities. Since major holidays always fall in the same month each year, and since the totals for a month iron out the difference between weeks and weekly "settlement" habits of business, the direct comparison of a given month this year with the same month in any other year gives the true answer about the increase or decrease in spending activity.

The next question is this: are the figures for spending activity—by themselves—sufficient as a rough guide to those forces which make for better business earnings? Unfortunately, they are not. It is a great mistake—and the source of most of the confusion of "single cause" thinkers and writers—to imagine that there is any real short cut in appraising anything as complex as modern society. By this I do not mean that every man has to be his own statistician or has to follow all the intricate figures of every kind of business. The whole purpose of this book is to show to what an encouraging



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extent the banks tell the final result of all these thousands of obscure transactions. But oversimplifying a problem is just as misleading as making it too complicated and mystifying.

It just happens to be a fact, tested by careful analysis over a long period of years, that spending activity alone is not always a sound guide to the general state of business health. It has been my experience that spending activity should be carefully compared with at least two other current facts before too many conclusions are drawn from it. What are those other facts? And how should they be measured as compared with spending?

One of the facts springs from the homely habit of business—and recently of consumers—known as borrowing. A businessman borrows money from his bank at certain seasons in order to pay for needed raw materials or to tide over the period between manufacture and ultimate sale. A consumer nowadays often borrows to buy something before he has saved up the entire purchase price. Manufacturers and farmers and consumers between them borrow in order to “keep things going” and to maintain the level of trade in general.

But what happens if trade (spending) does not keep pace with the increased borrowings? What happens, for instance, if a manufacturer borrows to increase his output, only to find that public spending has slowed down or fails to increase enough to take the goods off his shelves? In the language of business, he is simply “left holding the bag.” He must repay his loan, but he has failed to

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sell enough goods to realize the needed cash. Much the same thing is true if consumers borrow to buy, only to find that payroll cuts or lowered earnings make it difficult to pay the installments on the debt. Thus, nothing could be more logical and practical than to compare the total spending with the total general borrowing in order to find out whether increased spending is "keeping pace" with increased borrowing. How can this be done?

The simple way is to use the direct ratio or comparison between spending and all bank loans including those made on security collateral. By and large, security loans do not generally represent commercial transactions but are closely related to financial operations and sheer "necessity" loans of individuals. The proceeds are "spent."

Let us suppose, then, that in October of a given year total dollars spent in the month equal four times the amount of general loans, whereas in the previous month the comparison was only three and a half times. In this case, then, spending has risen much faster than borrowing. From this we can reach the common-sense conclusion that no one is likely to be caught "holding the bag" in the very near future. Whatever loans have been made have been justified by increased business or profits.

But suppose we find that, while spending has increased, general loans have increased even more in percentage. This presents quite a different picture. Spending has actually declined—*when compared with borrowing*. This is a distinctly unhealthy sign for business at large. As a matter of historical

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interest, this is precisely what happened in the late fall of 1922 and the early months of 1923, just before the "baby depression" of 1923-1924 set in. All other business figures were cheerful. Freight carloadings were doing well; electric power output was rising brilliantly. So-called indexes of "industrial production" were rising. But borrowing was increasing faster than spending—and within a few months business at large received a considerable setback.

In all common sense, then, we must modify our ideas on spending activity "in the raw" by comparing it with the rate at which the country is going into bank debt or out of it. A merely "flat" trend of spending activity might be very encouraging if it were accompanied by declining aggregate loans; or a steady rise in spending activity might be wholly nullified (as an indicator of growing business earnings) by a still sharper rise in aggregate loans.

But what of the second comparison needed to modify "raw" spending activity? Here again it is a comparison suggested by common-sense experience; namely, the trend in spending compared with the trend in the general price level, that is, in the price of all those items which, taken together, form the final objective of all spending.

The Federal Reserve Bank of New York makes up a close monthly estimate of the general price level, giving due weight or importance to all items: raw materials, manufactured goods, food, rent, city and farm land values, etc. As money is spent, it is

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spent approximately in the proportions allowed for in this price level estimate. It is only natural, then, to conclude that if general prices rise 10 per cent in a year, dollar spending would also have to rise 10 per cent merely to keep pace with increased dollar costs of everything. If the percentage rise in spending is *less* than the percentage rise in general prices, then there is actually *less volume of business being transacted*—fewer automobiles being bought, fewer bushels of wheat, fewer real-estate transactions, fewer of all of these transactions taken in total, even if here and there we know of a specific exception.

Thus one way, at least, of detecting a creeping decline in total business, even when the figures on particular lines are highly optimistic, is to compare spending with price level from month to month. The leading newspapers carry the New York Reserve Bank's figures on price level every month, and nearly every large statistical service either publishes these particular figures or its own equivalent estimates.

In any case, it is important to compare spending activity with a *general* price level estimate rather than with commodity prices or raw material prices only. The business of the country, on which money is spent, is far too inclusive to be judged only by commodity prices. In manufacture, for instance, rising raw material prices might be entirely offset by new machinery, so that the price of finished goods to the consumer could actually be reduced. Or, real estate in large cities may still be at low ebb, in price

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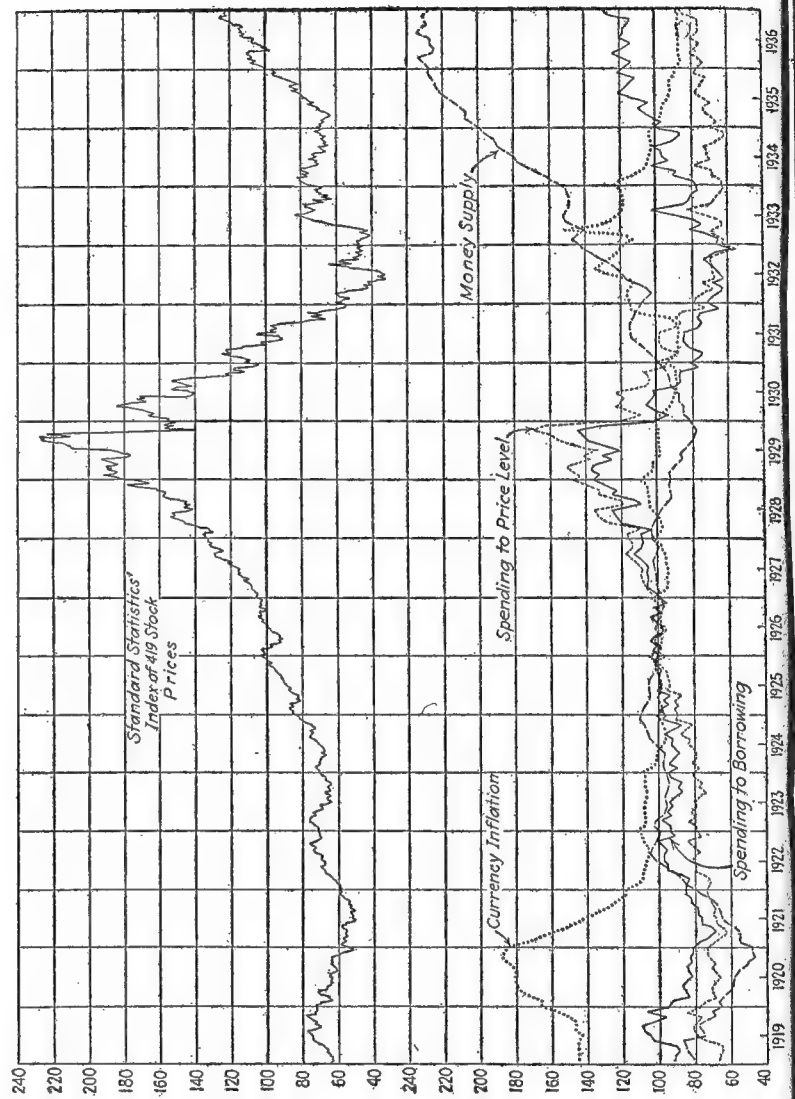
terms, when other prices are rising. Yet part of the money being spent is in rents and real-estate transactions. Thus a *general price level index* is the one to use as a modifier of the trends in spending activity.

We now come to a third influence constantly at work on stock prices, that is, on all equity values. This is the effect of gold supply in a world still using gold as the settlement medium for international transactions, and the effect of our own gold supply on the inherent value of our currency and our bank deposit money. The theory of this subject is highly controversial, but the broad idea back of it can be stated quite simply.

Suppose we have outstanding \$5 billion of cash currency. Suppose, also, that we have a metallic (gold) reserve back of that currency of only \$4 billion. If we decided to "redeem" all the circulating currency in gold, we would have enough gold to redeem only 80 cents on each dollar of currency. (Even when we are "off" the gold redemption standard, the fact that we maintain a gold reserve at all indicates the general feeling that redemption should always be possible, even if not actually practiced at the moment.) On the other hand, if we have \$6 billion of currency in circulation, but have \$7 billion in gold reserve, then we have more than enough to make 100 per cent redemption of every currency dollar.

Thus, in a broad way, we can say that our currency is "inflated" (i.e., worth less in terms of gold redemption possibilities) when our gold stock is less





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than our circulating currency, and “deflated” when we have 100 per cent gold backing or better. Some economists may object to this use of the words “inflated” and “deflated,” but I am sure that most of them would at least admit that in one case our currency is “overextended” in relation to gold reserves and in the other case not overextended at all. Chart 10 shows the course of currency inflation and other measures since 1919.

Another important measure of monetary inflation (in the technical sense of money compared with gold reserves) is the total of currency plus all bank deposits, compared with monetary gold stock. If figures for all the banks in the country were published at regular and frequent intervals, the layman could make this computation quite as easily as for currency. But, unfortunately, the figures for all commercial banks are published only in the reports of the Comptroller of the Currency, and at infrequent intervals.

As a matter of record, however, the table shown on page 128 shows the number of cents of gold (always at “old” value<sup>1</sup>) back of the combined deposits and currency of the country since 1919.

It will be noted that our two periods of greatest “overextension”—or periods with the smallest gold reserves compared with total money—were in 1920 and again in 1928. In a broad way, our total money has been deflating—or gaining strength in terms of gold backing—ever since 1928, and reached

<sup>1</sup>Since a “revaluation” does not mean that we have any more ounces of gold, comparisons should always be with the “old” value.

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its largest gold backing for the entire period in 1936.

| As of<br>June 30 | Bank deposits<br>plus currency (in<br>billions of dollars) | Gold (in billions<br>of dollars)* | Cents of gold per<br>dollar of total<br>money* |
|------------------|------------------------------------------------------------|-----------------------------------|------------------------------------------------|
| 1919             | \$36.350                                                   | \$2.882                           | 7.93                                           |
| 1920             | 40.330                                                     | 2.567                             | 6.36                                           |
| 1921             | 37.230                                                     | 2.967                             | 7.96                                           |
| 1922             | 38.070                                                     | 3.489                             | 9.16                                           |
| 1923             | 40.810                                                     | 3.753                             | 9.20                                           |
| 1924             | 43.790                                                     | 4.184                             | 9.55                                           |
| 1925             | 47.400                                                     | 4.073                             | 8.59                                           |
| 1926             | 49.030                                                     | 4.151                             | 8.47                                           |
| 1927             | 51.520                                                     | 4.319                             | 8.38                                           |
| 1928             | 52.610                                                     | 3.832                             | 7.28                                           |
| 1929             | 51.840                                                     | 4.024                             | 7.76                                           |
| 1930             | 53.430                                                     | 4.241                             | 7.94                                           |
| 1931             | 50.080                                                     | 4.578                             | 9.14                                           |
| 1932             | 39.600                                                     | 3.669                             | 9.27                                           |
| 1933             | 36.470                                                     | 4.030                             | 11.05                                          |
| 1934             | 41.400                                                     | 4.610                             | 11.14                                          |
| 1935             | 46.340                                                     | 5.325                             | 11.49                                          |
| 1936             | 52.120                                                     | 6.205                             | 11.91                                          |

\* At old gold value.

In so far as a currency inflation is a stimulant to the dollar values of equities, and therefore a partial offset to flat or downward trends in spending activity or in money supply, the currency inflation of 1932, coming at a time of recovery in money supply, was one of those forces which probably counteracted the slow decline in spending activity in that year. It is at all times a basic factor which the layman should watch—especially if, for some reason, gold should again begin to flow out of the

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country, thereby reducing the potential metallic reserve back of our money.

In conclusion, then, any person interested in equity values (common stocks, privately owned businesses or income-producing real estate, etc.) should watch for the following:

1. A marked decline, continuing for several months, in total spending activity, as modified by comparison with (a) aggregate bank loans and (b) with the general price level.
2. A marked decline, continuing for several months, in money supply as measured by the comparison of "net" deposits to total bank loans.
3. A pronounced decline (particularly after a period of overextension or inflation) in circulating currency compared to monetary gold stock at "old" value.

Of the three sets of measures, the first is by all odds the most important in ordinary periods, since the volume of business and the rate of spending compared with borrowing largely determine the earning possibilities of business. But any extreme trend in money supply is also important because of its effect on the "going" interest rate, and the income basis on which people are willing to buy and hold equities.

Inflation or deflation of the currency is likely to move in a direction contrary to money supply; that is, a growing shortage of "net" deposits tends to increase the demands for "cash" money, and to accelerate the forces leading to a loss of national

## SEVEN KINDS OF INFLATION

gold stocks. But this is not always true. The main point is that the layman does not have to be concerned—for strictly practical purposes—with the remote economic causes for changes in these various factors. “What” they are doing is more important to him than “why” they are doing it.

If earnings trends are favorable (as indicated by the spending activity measures) and if no acute shortage in money is developing, the equity outlook in a broad sense is reasonably sound. But even a rising money supply (as after 1929) can only with great difficulty counteract a persistent and deadly decline in spending activity. Without joining the ranks of the “single causers,” we must always and diligently keep our eye on factors affecting earnings if we hope to appraise our equities soundly.

### *The Arithmetic of the Measures*

#### *A. The Ratio of Spending Activity to Total Loans.*

For this ratio we need the two figures of dollar spending for a given month compared with aggregate loans as of the Wednesday report nearest to the end of the same month.

For *spending*, we look at the “Monthly Statement of Debits to Individual Accounts by Banks in Reporting Centers.” This report usually appears in the newspapers on the second Wednesday of each month, giving the figures for the entire preceding month for 141 cities, a series that has been kept since 1919.

Thus, for illustration (and for comparison with Oct. 28, 1936, bank reports on loans), the October, 1936, spending figures appeared in the form shown on page 131.

The figure we are interested in for present purposes is the one on the bottom line in the third column from the right; namely, \$37.312 billion for October, 1936.

Our first bit of arithmetic is to “adjust” this figure for so-called “seasonal variation.” This simply means that we know from experience



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that spending usually rises in certain months and declines in others as compared with the average for all twelve months of the year—and that we ought to make allowance for this before concluding that spending is really increasing.

*Board of Governors  
of the Federal Reserve System  
Nov. 10, 1936*

### MONTHLY STATEMENT OF DEBITS TO INDIVIDUAL ACCOUNTS BY BANKS IN REPORTING CENTERS

(Monthly figures are derived from weekly reports, the figures for weeks that do not fall entirely within a single calendar month being prorated)

#### SUMMARY FOR BANKS IN 141 CENTERS (In thousands of dollars)

| Federal Reserve<br>Districts | Num-<br>ber of<br>cen-<br>ters | October<br>1936 | September<br>1936 | October<br>1935 |
|------------------------------|--------------------------------|-----------------|-------------------|-----------------|
| No. 1. Boston.....           | 11                             | 2,147,642       | 1,665,928         | 1,808,261       |
| 2. New York.....             | 7                              | 17,889,618      | 16,327,569        | 16,362,100      |
| 3. Philadelphia...           | 10                             | 1,741,378       | 1,607,257         | 1,597,689       |
| 4. Cleveland.....            | 13                             | 2,053,796       | 1,791,549         | 1,676,418       |
| 5. Richmond.....             | 7                              | 791,022         | 663,222           | 663,909         |
| 6. Atlanta.....              | 15                             | 943,252         | 831,491           | 796,024         |
| 7. Chicago.....              | 21                             | 5,260,441       | 4,622,424         | 4,146,359       |
| 8. St. Louis.....            | 5                              | 1,078,273       | 921,558           | 918,211         |
| 9. Minneapolis...            | 9                              | 680,623         | 586,712           | 628,615         |
| 10. Kansas City...           | 15                             | 1,117,105       | 1,004,695         | 978,836         |
| 11. Dallas.....              | 10                             | 729,184         | 649,620           | 590,333         |
| 12. San Francisco..          | 18                             | 2,875,194       | 2,569,537         | 2,409,917       |
| Total.....                   | 141                            | 37,312,528      | 33,241,562        | 32,576,677      |

Thus, October spending is usually 3 per cent above the average; November, 4 per cent below the average; December, 8 per cent above the average. Unless we were making this "seasonal allowance" we might be alarmed by a November drop in spending—whereas the actual

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drop might be *less than usual* for that month, and therefore quite encouraging.

In order to adjust a monthly debits total for seasonal expectation (i.e., to determine whether the rise or fall is greater or less than normally expected), we simply divide the total dollars shown in the report by the seasonal factor for that month. There are many ways of computing seasonal factors, but the series listed below will be adequate for present purposes:

| Month                       | Seasonal Factor          |
|-----------------------------|--------------------------|
| January.....                | 106                      |
| February.....               | 99                       |
| March.....                  | 106                      |
| April.....                  | 101                      |
| May.....                    | 100                      |
| June.....                   | 102                      |
| July.....                   | 97                       |
| August.....                 | 90                       |
| September.....              | 92                       |
| October.....                | 103                      |
| November.....               | 96                       |
| December.....               | 108                      |
| Total for year.....         | $\frac{1,200}{12} = 100$ |
| Divided by 12 (months)..... |                          |

It will be noted that these factors total 1,200, which, divided by the twelve months of the year, brings the average to 100.

Now—to adjust our October, 1936, total of \$37.312 billion for seasonal expectancy, we simply divide as follows:

$$\begin{array}{l} \text{October, 1936, "raw" spending} \quad \frac{37.312}{103} = 36.225 \\ \text{Divided by October seasonal factor} \end{array}$$

In other words, the "adjusted" spending figure for October, 1936 (after allowing for an expected 3 per cent over the average month), was \$36.225 billion.

We now want to compare this with aggregate loans. Referring to the Oct. 23, 1936, member bank report on page 73, we simply do

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as before (page 90) and subtract all securities from the item "loans and investments."

Thus the ratio of October, 1936, adjusted spending to October, 1936, total loans works out:

$$\frac{\text{Spending } 36.225}{\text{Loans } 8.721} = 4.154 \text{ or } 415.4 \text{ per cent}$$

If we want to make an index of this ratio, we then divide it by the average ratio for the year 1926 (or 5.90) as follows:

$$\frac{\text{Ratio for October, 1936 } 4.154}{\text{Divided by 1926 ratio } 5.540} = 1.173 \text{ or } 117.3 \text{ per cent}$$

This shows us that spending compared to borrowing for October, 1936, was 17.3 per cent higher than for the year 1926.

Applying this same operation to the adjusted spending and borrowing figures for October, 1935 (as shown in the "raw" on the right-hand column of both reports), we would find that the index then stood at 113.1 per cent—or 13.1 per cent above 1926. Thus, over this one-year period the gain in the spending to borrowing comparison is slight—about 3.71 per cent.

### *B. The Ratio of Spending Activity to General Price Level.*

As the general price level is always expressed in an index, this measurement involves making an index of spending activity and then dividing this index by the index of prices, making certain that both indexes use the same year as 100.

I suggest using for general prices the General Price Level Index compiled and published monthly by the Federal Reserve Bank of New York. It is one of the best—and worth waiting for, even though it often appears a full month after the banking figures for the same month. (Price level moves so slowly that, if we are in a hurry, we can simply guess at a slight up or down trend from the last figure published. Our guess can be based on reported trends in commodity prices in the newspapers.)

This price level index uses the year 1913 as a base. But since 1926 is a more convenient year to use for banking figures, we can "convert" the Reserve index into a 1926 index by simply dividing each month's figures by 171—that being the price level for 1926 in terms of a 1913 index base.

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Thus we find that the index of general prices for October, 1936, was 156. If we divide this by 171, we get  $\frac{156}{171}$  or 91.3 as our price level index with 1926 as 100.

Similarly, for October, 1935, we would get a 1926 index figure of 86.5. Thus the price level rose in one year from a 1926 index of 86.5 to an index of 91.3—a rise of roughly 5.5 per cent.

To compare spending with price level, we must also make a 1926 index out of our adjusted spending figures (see above, under *A*). To do this, we divide the adjusted spending figure for the month by the average monthly spending figure for 1926—which was \$50.660 billion. Thus, for October, 1936:

$$\begin{array}{l} \text{October adjusted spending } 36.225 \\ \text{Divided by 1926 average } 50.660 \end{array} = 0.715 \text{ or } 71.5 \text{ per cent}$$

And for October, 1935:

$$\begin{array}{l} \text{October adjusted spending } 31.627 \\ \text{Divided by 1926 average } 50.660 \end{array} = 0.624 \text{ or } 62.4 \text{ per cent}$$

We can now compare the rise in spending with the rise in price level for the year by simply dividing, for each year, the index of spending by the index of price, as follows:

For October, 1935:

$$\begin{array}{l} \text{Index of spending } 62.4 \\ \text{Divided by price index } 86.5 \end{array} = 0.721 \text{ or } 72.1 \text{ per cent}$$

For October, 1936:

$$\begin{array}{l} \text{Index of spending } 71.5 \\ \text{Divided by price index } 91.3 \end{array} = 0.783 \text{ or } 78.3 \text{ per cent}$$

Thus, over one year we find a marked gain in the comparison of spending with price level, showing that the *actual volume of goods and services* changing hands was increasing. This, combined with the slight uptrend in spending to borrowing (see *A* above), gives a picture distinctly favorable to earnings trends in business at large.

### *C. The Ratio of "Net" Balances to Total Bank Loans.*

We need only two figures to determine this sensitive ratio of money supply, the first being total loans and the second total deposits *minus*

## MEASURING EQUITY PRICE INFLATION

loans, or "net" deposit balances. We use, of course, end-of-month figures.

For illustration, the member bank report for Oct. 28, 1936, reproduced on page 73 will again serve. For loans (demand) we subtract all securities from the item, "loans and investments." This gives us \$8.721 for October, 1936, and (after adjusting for changes during the year shown in the right-hand column) \$7.902 for October, 1935.

For gross deposits, we take the sum of items 14, 15, 17a, and 17b (thus excluding government deposits) and get \$26.913 for 1936 and \$24.094 for 1935.

To find "net" deposit balances (supply), we then subtract loans from deposits, as follows:

|                     | 1936   | 1935   |
|---------------------|--------|--------|
| Deposits.....       | 26.913 | 24.094 |
| Less loans.....     | 8.721  | 7.902  |
| "Net" balances..... | 18.192 | 16.192 |

Our next work of arithmetic is to divide supply by demand:

*For 1936:*

$$\begin{array}{l} \text{Supply} \quad \quad \quad 18.192 \\ \text{Divided by demand} \quad \frac{8.721}{} = 2.086 \text{ or } 208.6 \text{ per cent} \end{array}$$

*For 1935:*

$$\begin{array}{l} \text{Supply} \quad \quad \quad 16.192 \\ \text{Divided by demand} \quad \frac{7.902}{} = 2.049 \text{ or } 204.9 \text{ per cent} \end{array}$$

We thus find that this sensitive money supply ratio has risen some 1.8 per cent during the year, adding to the stimulus for higher equity prices already established by measures A and B above.

To make a 1926 index of this ratio, we simply divide the current ratio by the actual average ratio for 1926, which was 39.1 per cent. Thus:

*For 1936:*

$$\begin{array}{l} \text{October ratio} \quad \quad \quad 2.086 \\ \text{Divided by 1926 ratio } 0.391 = 5.335 \text{ or } 533.5 \text{ per cent} \end{array}$$



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For 1935:

October ratio                    2.049  
Divided by 1926 ratio 0.391 = 5.240 or 524.0 per cent

Since the index shows us that this ratio was about five times as high in 1936 as in 1926, it is only common sense to realize that as a trend indicator it must be used with great caution. We should give it certainly not more than *one-quarter of its actual strength*, compared with full strength for each of the velocity measures (*A* and *B* above).

That is, if each of the velocity figures rises 10 per cent over a year (or a total of 20 per cent), this is four times as important to stock prices as a rise of 20 per cent in the "net balance to loans" ratio, and vice versa in the case of a drop in both measures.

In the case of an opposite trend (velocity rising and money supply falling) the same principle would roughly hold true, allowing, of course, for the obvious fact that a drop of 50 per cent is the opposite (in percentage) of a 100 per cent rise and a drop of 75 per cent is the opposite of a 300 per cent rise etc.

As this matter is always puzzling to those who are not constantly working in percentage figures, the table on page 137 may be helpful.

### *D. The Ratio of Circulating Currency to Monetary Gold Stock.*

This measure of the quality of our circulating currency, which reflects the results both of our international transactions (in the gold movements) and of our domestic use of currency for normal activity or for hoarding (as in 1931 to 1933), can easily be figured from the "related items" included in the *first* part of the Federal Reserve Statement reproduced on page 75. It is, broadly, a measure of currency inflation or deflation.

First we take from the above Federal Reserve Statement item 9, marked "Money in Circulation." On Oct. 28, 1936, this was \$6.302 billion. The right-hand column shows us that this item increased \$616 million during the year, so that the figure for October, 1935, was only \$5.686 billion.

Next we take item 7, marked "Monetary Gold Stock." On Oct. 28, 1936, this was \$11.031 billion and on Oct. 30, 1935, only \$9.686 billion—both figures being at the "new" price for gold since the 1934 "devaluation" of the gold dollar.

Now—to make comparison possible with other years on an index basis, we must reduce the gold figure at "new" value to what it would have been worth at "old" value in years such as 1926. We do this simply by multiplying the present figures by 59.1 per cent—since the

# MEASURING EQUITY PRICE INFLATION

## A TABLE OF PLUS AND MINUS PERCENTAGE EQUIVALENTS

|                   |                    |                     |
|-------------------|--------------------|---------------------|
| - 1 offsets + 1.0 | -34 offsets + 51.5 | -67 offsets + 203.0 |
| - 2 + 2.0         | -35 + 53.8         | -68 + 212.5         |
| - 3 + 3.1         | -36 + 56.3         | -69 + 222.6         |
| - 4 + 4.2         | -37 + 58.7         | -70 + 233.3         |
| - 5 + 5.3         | -38 + 61.3         | -71 + 244.8         |
| - 6 + 6.4         | -39 + 63.9         | -72 + 257.1         |
| - 7 + 7.5         | -40 + 66.7         | -73 + 270.4         |
| - 8 + 8.7         | -41 + 69.5         | -74 + 284.6         |
| - 9 + 9.9         | -42 + 72.4         | -75 + 300.0         |
| -10 +11.1         | -43 + 75.4         | -76 + 316.7         |
| -11 +12.4         | -44 + 78.6         | -77 + 334.8         |
| -12 +13.6         | -45 + 81.8         | -78 + 354.5         |
| -13 +14.9         | -46 + 85.2         | -79 + 376.2         |
| -14 +16.3         | -47 + 88.7         | -80 + 400.0         |
| -15 +17.6         | -48 + 92.3         | -81 + 426.3         |
| -16 +19.0         | -49 + 96.1         | -82 + 455.6         |
| -17 +20.5         | -50 +100.0         | -83 + 488.2         |
| -18 +22.0         | -51 +104.1         | -84 + 525.0         |
| -19 +23.5         | -52 +108.3         | -85 + 566.7         |
| -20 +25.0         | -53 +112.8         | -86 + 614.3         |
| -21 +26.6         | -54 +117.4         | -87 + 669.2         |
| -22 +28.2         | -55 +122.2         | -88 + 733.3         |
| -23 +29.9         | -56 +127.3         | -89 + 809.1         |
| -24 +31.6         | -57 +132.6         | -90 + 900.0         |
| -25 +33.3         | -58 +138.1         | -91 +1011.1         |
| -26 +35.1         | -59 +143.9         | -92 +1150.0         |
| -27 +37.0         | -60 +150.0         | -93 +1328.6         |
| -28 +38.9         | -61 +156.4         | -94 +1566.7         |
| -29 +40.8         | -62 +163.2         | -95 +1900.0         |
| -30 +42.9         | -63 +170.3         | -96 +2400.0         |
| -31 +44.9         | -64 +177.8         | -97 +3233.3         |
| -32 +47.1         | -65 +185.7         | -98 +4900.0         |
| -33 +49.3         | -66 +194.1         | -99 +9900.0         |

(Note: intermediate points can be easily approximated.)

"new" gold dollar is worth (approximately) 59.1 per cent of what the "old" dollar was worth.<sup>1</sup>

<sup>1</sup> If the government should make further changes in the price of gold, the newspapers at the time would always give the comparison

## SEVEN KINDS OF INFLATION

Thus the October, 1936, figure of \$11.031 billion multiplied by .591 gives us a new figure of \$6.519 billion. Similarly, the October, 1935, figure of \$9.686 billion multiplied by .591 gives us a new figure of \$5.724 billion. These new figures are what the gold stocks of the above dates would have been worth at the "old" dollar value of 1926.

We are now ready to make a ratio of currency to gold which we can compare with 1926 for index purposes. All we do is to divide in each case the figures for currency by the figures for gold at "old" value, as follows:

*For 1936:*

$$\begin{array}{rcl} \text{Currency} & 6.302 & \\ \text{Divided by gold } 6.519 & & = 0.967 \text{ or } 96.7 \text{ per cent} \end{array}$$

*For 1935:*

$$\begin{array}{rcl} \text{Currency} & 5.686 & \\ \text{Divided by gold } 5.724 & & = 0.993 \text{ or } 99.3 \text{ per cent} \end{array}$$

This shows us that currency in circulation was much *less* in 1936 *when compared with gold* than in 1935. In other words, our currency "deflated" during the year by some 2.7 per cent. This would tend to give the dollar greater purchasing power in international trade and generally to act as an economic *offset* to other price raising forces.

The ratio of currency to gold for the average of the year 1926 was 111.5 per cent (i.e., currency exceeded gold by 11.5 per cent). To make a 1926 index, then, of our currency to gold ratio, we divide our present ratios by the 1926 ratio as follows:

*For 1936:*

$$\begin{array}{rcl} \text{October ratio} & 0.967 & \\ \text{Divided by 1926 ratio } 1.115 & & = 0.867 \text{ or } 86.7 \text{ per cent} \end{array}$$

*For 1935:*

$$\begin{array}{rcl} \text{October ratio} & 0.993 & \\ \text{Divided by 1926 ratio } 1.115 & & = 0.891 \text{ or } 89.1 \text{ per cent} \end{array}$$

Thus we find currency in both 1935 and 1936 greatly "deflated" compared with 1926 and still (in October, 1936) in a deflationary trend.

with the "old" value prior to 1934. Moreover, any banker could furnish the needed information.

## MEASURING EQUITY PRICE INFLATION

### SUMMARY

We now come to the question of how to make a rough mental estimate from these four measures of whether or not (as of October, 1936) we are still in an economic uptrend favorable to equity prices.

We must remember that we are dealing in "offsets"; and since we shall be dealing with the same kind of offset problem in a later chapter on price level inflation, the methods now suggested will cover both cases.

First of all, we have two ways of measuring gains and losses: (a) the year-to-year trend, comparing a given month of this year with the same month last year and (b) the trend from 1926 as our "index" base year which we call 100. In each case, the rough method of figuring offsets is the same.

The year-to-year comparison, however, is safer for ordinary purposes, since the movements of any one factor over a single year are not often great enough to cause wide error because of the rough methods we must use. The problem is a bit like shooting at a near-by target as compared with a distant one. A slight error in aiming at a target twelve feet away will not prevent our hitting the target; but an error of the same angle in aiming at a target one hundred twenty feet away would mean missing the target entirely.

Suppose, then, we take our four measures in index figures for October, 1936, and October, 1935, and see how we might use them. They tabulate as follows:

| Measure                         | 1935  | 1936  | Per cent change |
|---------------------------------|-------|-------|-----------------|
| A. Spending to borrowing.....   | 113.1 | 117.3 | +3.71           |
| B. Spending to price level..... | 72.1  | 78.3  | +8.60           |
| C. Money supply.....            | 524.0 | 533.5 | +1.81           |
| D. Currency inflation.....      | 89.1  | 86.7  | -2.70           |

Now—to estimate roughly the offsetting value of these four measures, we should always follow a regular procedure:

- (1) Add up all the percentage gains, using, however, *only one-quarter of the gain* in money supply (if it happens, as in this case, to be a gain) as against full strength for all other gains. Thus:

## SEVEN KINDS OF INFLATION

|   |   |                        |
|---|---|------------------------|
| A | = | + 3.71                 |
| B | = | + 8.60                 |
| C | = | $\frac{1.81}{4} + .45$ |

Total gains = +12.76

- (2) Add up the *plus equivalents* of all measures showing a loss. (For table of plus and minus equivalents see page 137.) In the present case, there is only one loss to consider. Thus:

D = -2.70, of which the plus equivalent is +2.77

- (3) Then, if the gains are greater than the plus equivalents of the losses (as in the present case), subtract the latter from the former. Thus:

|                                      |        |
|--------------------------------------|--------|
| Gains.....                           | +12.76 |
| Less plus equivalents of losses..... | 2.77   |
| Net gain.....                        | + 9.99 |

This figure (+9.99) would then represent the net gain in conditions favorable to equity prices, after allowing for the offsetting decline in measure D.

- (4) But if, as happens many times, the plus equivalents of the losses *exceed* the total gains, we have an extra process to go through. To illustrate, suppose measure D were *down* to say -15. The plus equivalent (see table, page 137) would then be +17.60, or a figure greater than our total gains of +12.76. We would then subtract the latter from the former. Thus:

|                                 |       |
|---------------------------------|-------|
| Plus equivalents of losses..... | 17.60 |
| Less gains.....                 | 12.76 |
| Net difference.....             | 4.84  |

But since this difference is in favor of the *down* side, we would have to take for our final offset figure the *minus equivalent* of +4.84 or a net loss of -4.62.

- (5) To the above we need add only this further caution: if we are using less than full strength of any one measure (in this case, only one-quarter of money supply) and that measure happens to be showing a loss, we must *first* take the plus equivalent of



## MEASURING EQUITY PRICE INFLATION

that measure *at full strength* and then divide the plus equivalent by *four* in order to calculate our reduced strength. It would give an entirely wrong result to start by taking only one-quarter of the actual minus figure. To illustrate, let us suppose a money supply *drop* to  $-50$ . Then:

- (a) Plus equivalent of  $-50$  =  $+100$
- (b) Divide  $+100$  by 4 =  $+25$
- (c) Then the true minus figure would become  
the minus equivalent of  $+25$  =  $-20$

The point is that if we took first one-quarter of  $-50$ , we would have a minus figure of only  $-12.5$  and a plus equivalent of only  $+14.2$  instead of  $+25$ .

We must remind ourselves again that although these measures, when offset as suggested above by simple arithmetic, do help the newspaper reader to estimate a basic up or down *trend*, they do not tell much about the actual *price level* at which equities should stand; nor can anyone hope to "play the market" on such rough estimates.

To estimate price level, even approximately, demands several additional and more complicated measures, and very careful mathematical "weightings" of each, as illustrated in the banking composite shown on Chart 9 on page 114. Even then, as pointed out before, important discrepancies crop up, also changes of "lag" between basic conditions and market response to them, all of which make attempts at market "forecasting" highly dangerous—although the erratic up and down movements during 1936 on Chart 9 did suggest caution in the stock market of early 1937.

Thus, the figures above showing a net gain of some 9.99 per cent between October, 1935, and October, 1936, would indicate that a real economic uptrend was beneath the stock market gains of the period, although the fact that stocks had risen some 33 per cent would also suggest that stock prices had somewhat "outpaced" the actual economic improvement.

To show the danger of assuming proper stock price *levels* (as against year-to-year *trends*), suppose we examine the total changes from 1926 to 1936 as follows:

| Measure                         | 1926  | 1936  | Per cent change |
|---------------------------------|-------|-------|-----------------|
| A. Spending to borrowing.....   | 100.0 | 117.3 | +17.3           |
| B. Spending to price level..... | 100.0 | 78.3  | -21.7           |
| C. Money supply.....            | 100.0 | 533.5 | +433.5          |
| D. Currency inflation.....      | 100.0 | 86.7  | -13.3           |

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To estimate these offsets we would follow the procedure suggested above and first add up all the *plus* changes:

$$\begin{array}{rcl} A & = & + 17.3 \\ C (\frac{1}{4} \text{ strength}) & = & +108.4 \\ \hline \text{Total gains} & & +125.7 \end{array}$$

Then we would add up the *plus equivalents* (see table, page 137) of all *minus* factors:

$$\begin{array}{rcl} B = -21.7 & = & \text{plus equivalent of } 27.7 \\ D = -13.3 & = & \text{plus equivalent of } 15.3 \\ \hline \text{Total plus equivalents} & & 43.0 \end{array}$$

Our third step would be to subtract from our total plus gains (125.7) the total of our plus equivalents of losses (43.0). Thus:

$$\begin{array}{rcl} \text{Total of \% gains} & & +125.7 \\ \text{Less plus equivalents of losses} & & 43.0 \\ \hline \text{Net gain} & & + 82.7 \end{array}$$

From this we might assume (if we were misled into trying to establish *levels* compared with 1926) that stocks toward the end of 1936 would be 80 to 85 per cent above 1926. But in point of fact Standard Statistic's index of 419 stocks reached a level only 28 per cent above 1926 at the high point of November, 1936.

The dangerous factor is obviously measure C of money supply, even when we give it only one-quarter of its strength. The point is (and this can be estimated only by methods more complicated than ordinary arithmetic) that this measure *has less and less importance as it rises to extreme highs*. It does tend to boost stock prices through lowering the investment return demanded by stock buyers. But even an enormous money supply could not justify high prices for stocks with (let us suppose) deficit instead of earnings prospects. When money supply reaches an index of over 200 compared with 1926, added increments should be given mentally even less weight than one-quarter.

The chart on page 126 shows the course of the stock market since 1919 (Standard Statistic's 419 stocks) with the four measures suggested in this chapter plotted underneath. The money supply measure, C, is

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plotted so as to give it visually only about one-quarter of its actual strength.<sup>1</sup>

Note particularly the declining trends in money supply and currency inflation during 1929—and the rise in both these measures in 1932. In both cases they helped to offset contrary movements of both the velocity measures. But from October, 1929, to late 1931 heavy declines in velocity and in currency inflation combined to offset the improvement in money supply. In 1921 velocity recovered soon after money supply.

<sup>1</sup>For those who remember their arithmetic particularly well (or who can use a "slide rule"), an excellent way of modifying the "strength" of this money supply measure is to take the square root of the actual index figure. Thus the square root of the index 533.5 for October, 1936, is 230.9—showing a gain over 1926 as 100 of only +130.9 instead of 433.5. It is the square root of the money supply index that is plotted on Chart 10.

### *New Reporting Forms*

Just as this book is going to press, the Federal Reserve Board in Washington announces a new form for reporting bank loans in the weekly reports of member banks.

The new form is meant to show the "purpose" for which a loan has been made, *e.g.*, for speculative or business purposes, rather than to show on what kind of collateral the loan has been made. This interrupts certain series now extending back to 1919 and earlier.

However, as the only "loans" item suggested for use in this book is the total of *all* loans, the method of obtaining the figure remains the same, *i.e.*, to subtract securities held by the banks from the item called "Total Loans and Investments."

## CHAPTER IX

### *General Price Level Inflation*



To start a battle royal among economists, simply ask this question: What raises the general price level?

The disagreement is more over details, however, than over the general principles involved. In the broadest sense, the classical theory still prevails, that the average of all prices moves upward when there is a marked increase in the quantity of money compared with the quantity of tangible goods, and when the velocity of that larger quantity of money at least keeps pace with the velocity of the older and smaller total.

In other words, if the total quantity of goods and services that goes to make up trade increases 10 per cent, but if the quantity of money increases 20 per cent in the same period, and if each dollar of the new total passes from hand to hand as rapidly as each dollar of the former total, then (according to the classical theory) general prices should rise. The general idea back of this theory is that if tokens

#### GENERAL PRICE LEVEL INFLATION

(money) in actual use increase faster than the physical volume of goods, more butter is being spread over each slice of bread. Money becomes relatively more plentiful and therefore less valuable, while goods become relatively less plentiful and therefore more valuable in terms of money itself.

In this broad view, the classical theory has a good deal of common sense to recommend it. But there are practical difficulties involved. First, just what items should we include in figuring total "money"? Second, just how can we determine at any given time the actual quantity of goods and services making up the physical basis for trade? It is around these two points, but especially around the first of them, that the battle of the economists rages.

In such cases it has always seemed to me that the sensible thing is to keep an open mind, to experiment boldly with known facts and figures, and to arrive if possible through trial and error at some conclusion that corresponds with the historical facts about prices. We know what prices have done from year to year. We know where to get the facts about the quantity of different kinds of money during those same years—the quantity of gold, for example, of circulating notes, and of the various kinds of bank deposits. We also know where to get the facts about the rate of spending as an aid in determining velocity of money. And we know how to get an approximation, at least, of the volume of physical goods from year to year, and ways by which we can guess at the trend in volume for intermediate periods. From all this mass of data we



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ought surely to be able to *test* the classical theory of prices by comparing known facts about money and goods with known facts about prices.

In this connection, and as a matter of record and tested experience, Chart 11 shows a comparison of the general price level (as estimated monthly by the Federal Reserve Bank of New York) with a composite of various money and banking figures from 1900 to 1936. This composite takes into account the rate of spending outside of New York City, the velocity of the money created through bank borrowings; also the total volume of bank deposits and currency, the basic gold supply of the country, and a few other related factors all adjusted to allow for long-term trends in the public's use of banking facilities, etc.

This is not the kind of composite that the layman could construct easily from published newspaper figures. Nearly every factor in it has to be carefully adjusted for seasonal movements, and each factor must be accurately weighted (in accordance with trial and error experience) in proportion to all other factors. But granting that it is an honest piece of statistical work, in which weights or proportions are constant throughout (for all of which I can vouch), this composite does serve to indicate that the price trend moves broadly in the same direction as the combined forces of the quantity and velocity of certain types of money, in comparison with bank debt as representing one kind of credit and also (very roughly) the volume of goods. In other words, it does help to prove the validity of the classical

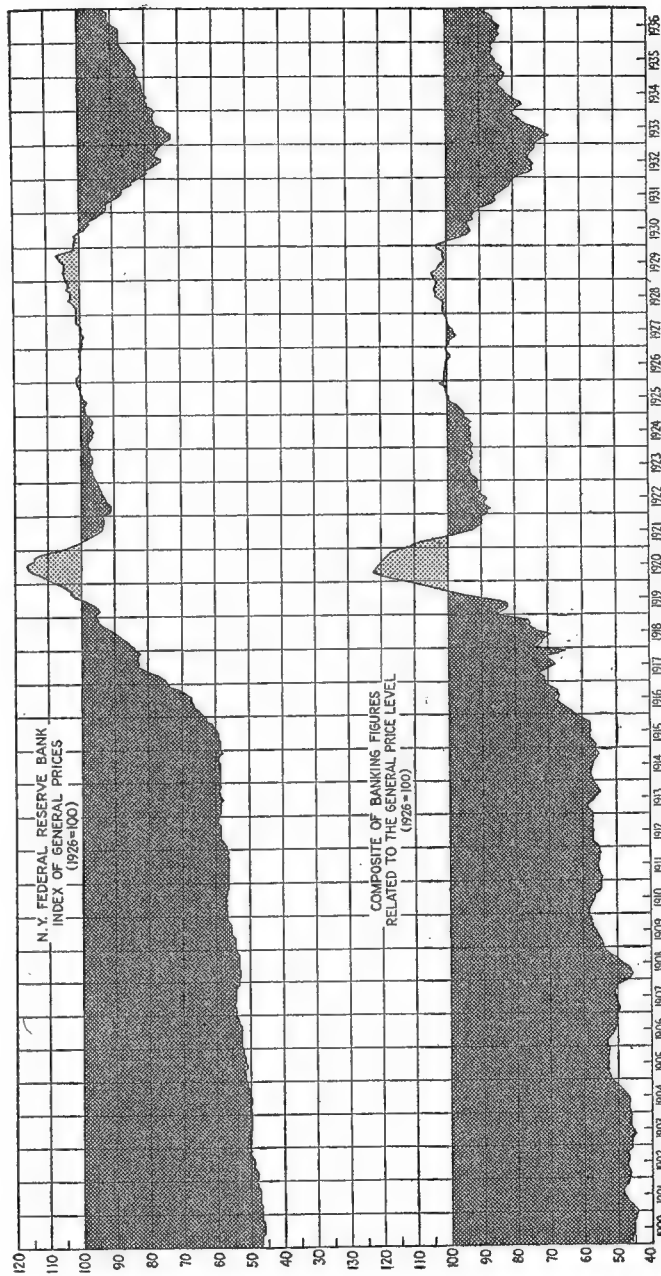


CHART 11.—A composite of factors derived from bank reports (adjusted for long-term trend), compared with the general price level.

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"quantity theory," at least for the thirty-six-year period used.

The trouble with most price theory discussions is that they do not anchor themselves to facts. They nearly always provide one enormous loophole: the statement that this or that theory would prove out *if other things remained equal*. But "other things" never do remain equal! Velocity is always changing. The quantity of each type of money is always changing. And the volume of goods is always changing. One feels a bit like a juggler in trying to keep track of all three "other things" at once. Now, the chart on page 147 is just such a juggler's effort, and no more. But simply because it does anchor itself to historical price facts, and without any arbitrary changes of weight or influence to "force" a correspondence, it avoids all necessity of the futile appeal to the "other things being equal" argument. It has served to give me what small assurance I can summon in discussing price inflation from the viewpoint of a modified quantity theory. Moreover, although the layman could not readily construct a composite of this sort, he can, as I shall try to show later, measure enough of the facts involved to provide himself with a good rough guide to the basis for current price movements.

Since the quantity theory seems to have some provable validity, it is well worth while to examine the principles back of it a little more closely—especially the reasons for believing that the quantity and velocity of *certain types* of money are more important to prices than the quantity and velocity of

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all sorts and kinds of money lumped together. This involves a little attention to the question of money itself.

Much of the supposed dark mystery surrounding money is due simply to the multitudinous money "systems" in actual use in the modern world, and not to the basic idea of money itself, which is really quite simple.

What money *should* be—and what any honest money system should try to make it—is just this: a debt owed by the community in exchange for actual goods or services delivered to the community, and exchangeable at some later date for an *equivalent value* of goods or services.

We can illustrate it this way. John Olsen raises 1,000 bushels of wheat, keeps 100 bushels for his own use, and delivers (sells) the other 900 to the "community," that is, to others who need wheat. At the time he delivers this wheat it has a worth to the community equal to that of an automobile selling at \$900. But John Olsen already has an automobile. He is not ready to make an immediate exchange of his wheat either for an automobile or for any other article. So he accepts a receipt issued by the community, either in the form of cash currency or of a bank deposit credit, the receipt being officially marked with the present exchange value of his wheat—\$900.

That receipt actually represents a debt of the community to him. The debt can be discharged only when he finally agrees to exchange his receipt for goods valued at that time at \$900. Thus, money,

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in the truly sound sense, gets its real value from actual goods and services delivered and from the real goods and services for which this money (negotiable receipt) can later be exchanged.

The trouble (i.e., the mystery) all begins when *time* begins to do its work. As time progresses, the relative values of all sorts of goods and services change. New production methods enable automobile makers to sell for \$800 the same quality of car that used to sell at \$900. A drought kills huge herds of cattle and the scarcity of meat shoots its price per pound skyward. A wave of caution sweeps over the business world, and demand for goods falls so rapidly that it forces a hurried liquidation of manufactured goods at bargain sale prices. But as time records all these changing circumstances, John Olsen still holds his receipt for \$900. He is not yet ready to let the community discharge its debt to him.

After a year, let us say, he finds that he can now exchange his receipt not only for an automobile, but also for a radio (now selling at \$50 instead of \$75) and for a comfortable new bed and mattress. Time has thus worked most favorably for John Olsen. Without producing a single extra bushel of wheat, he finds that his last year's receipt for 900 bushels will now exchange for more goods than before. By holding the community in debt to him at his own pleasure, he has increased the value of the debt when measured by its exchange value into goods.

Thus the mystery of the power of money is not really a mystery at all. It is simply the fact that



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money, during an indefinite period of *time*, acquires a value quite distinct from the value of the goods it originally represented. It has the original exchange value of those goods *plus* (or *minus*) the changing price of other goods over a period of time which John Olsen alone (and not the debtor community) has the right to determine.

In other words (and this is a point seldom given proper emphasis in money discussions) money claims differ from all other debt claims in this very special sense, that a money claim *has no time limit within which it must be collected*, and that *it cannot be paid off until the individual creditor is willing to have it paid!*

Consider the nearest approach to a money claim, namely, a "demand loan." Like a money claim, it must be paid on demand. *But the lender cannot force the borrower to continue in debt.* If the borrower must pay on demand, he can also settle whenever it suits his convenience. But not so with a money claim. It is all one-sided. The lender can demand payment in goods whenever he pleases, but he can also refuse to have the debt discharged for as long as he pleases. Money is a supreme and unique form of creditor claim that is both a demand obligation and, at the will of the creditor, a perpetual debt.

Once this point is clear, much of the mystery of the unique influence of money on human affairs disappears. We see then why the "quantity of money" (i.e., the quantity of indefinite debt claims against the community) looms so important in all discussions of price level. It is not merely a matter

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of the "number of tokens" used to cover a given volume of goods or trade, but something more than that. It is the added (or intimately related) fact that the only way the debt claims of money can be satisfied is through exchange for goods. If, therefore, the quantity of money claims increases faster than the totality of goods available to satisfy those claims, then it is only natural that the "prices" of goods should rise. Goods have become scarce compared with accumulated claims against those goods.

This looks simple—and it is. But we also have a clue, in the time element involved in money, to the importance of *velocity* as well as *quantity* in determining prices. Here is the point. If the money creditors are very slow about turning their money claims into goods, then there is ample time for the community to increase the production of goods and thus meet all claims as they are presented. No scarcity of goods to satisfy money claims ever actually develops—because the discharge of the money debts is spread over a relatively long time. The money claims may "overhang" the community, so to speak, but as long as the creditors are lenient (i.e., as long as the "velocity" of money remains low) there is no dislocation of supply (goods) and demand (volume of money claims "cashed in" for goods); hence no reason for a change in the general price level.

So it follows quite naturally that an undue *increase* in the quantity of money claims compared with goods may be offset, as a price-raising influence, by a slowing up of the owners of money in

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cashing in their claims. Also, an undue *decline* in money compared with goods may be offset, as a price-depressing influence, by an increasing speed of owners in converting their money claims.

Thus *spending activity*—or the rapidity with which owners of money cash in their claims—becomes quite as important for prices as the mere volume of money compared with goods. A period of rapid spending is a period of rapid “calling” of money claims, tending to increase the relative scarcity of goods within any given time period. The opposite is a period of low spending and “hoarding” of money claims.

If we disregard for the moment the different types of money, we can say that \$50 billion of money claims being spent once a month mean a rate of conversion into goods of \$600 billion a year. But we can also say that \$40 billion of money claims being spent one and a quarter times a month likewise mean an annual rate of conversion of \$600 billion; or that only \$30 billion of money claims being spent two and a half times a month mean an annual rate of conversion of \$900 billion. In this latter case the volume of goods available over the year would have to increase nearly 25 per cent in order to prevent a price rise, in spite of the fact that the volume of money, by itself, was lower.

All this would be simple to figure from published facts if we could disregard the various kinds of money under our particular money “system.” But here is just where we run into one of those complications which too many theories ignore. We have one

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kind of money—gold (and, to some extent, silver)—which is more than an exchangeable receipt. It is also a valuable commodity in its own right. It is not simply a measure, like a yardstick. To a very special degree, anyone who accepts gold in exchange for his wheat or other goods has already “cashed in” his money claim. He has directly exchanged one valuable commodity for another. The official stamping of a piece of gold by the government automatically makes it “money,” but it would have approximately the same “commodity” value whether it were stamped or not. This is obviously not true of paper money nor of a bank deposit credit.

Then we have two major kinds of bank deposit money. One, as explained in Chapter III, is “created” every time a bank makes a loan. The other is “created” every time a bank makes an investment. There is a marked difference between the two kinds of created money. When the bank makes a direct loan, the amount of that loan is at once added to the debt total of the country. We can increase bank money in this way only by going more into debt. But in most cases when the bank buys an investment (such as a railroad bond) there is an increase in bank money *without any increase in total debt*. The debt, represented by the bond, already existed. It is now owed to the bank instead of to the individual who sold it to the bank. It has changed hands. But it is not a new debt.

Thus, broadly speaking, we can have an increase in money supply in three ways: first, through new

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gold mined from the earth or imported from abroad and involving no increase in debt; second, through bank loans, involving increased dollar debt for every dollar "created"; and third, through bank investments in securities already outstanding,<sup>1</sup> involving no increase in total debt.

It takes no great imagination to see that these different kinds of money might have quite different effects on the economic system and on prices. Bank loan money is created for a specific purpose, perhaps for a self-liquidating business transaction or for a speculative operation. It is canceled out automatically upon the completion of that operation or transaction. Bank investment money remains outstanding just as long as the bank wants to hold its investment total at a given figure. Gold and silver, being both money and valuable commodities, remain outstanding permanently unless exported or melted down for use in the arts.

From this we can see that bank loan money comes the nearest to being the type of money that represents a receipt for goods delivered to the community. We would naturally suspect, then, that it is the velocity or "turnover" of money created by bank loans that would have the greatest effect on prices, rather than the velocity of all kinds of money lumped together. (As we have seen in Chapter VIII the velocity of borrowed funds also has a special significance in showing whether spending is

<sup>1</sup> Of course, when a bank invests in a "new issue" of government or corporate bonds there is an increase in total debt, but accurately speaking, the debt is created independently of the bank's investment.



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rising as fast as borrowing and therefore justifying the borrowers' hopes.)

As to whether this suspicion is justified or not, I can only say that the velocity of bank loan money is one of the major factors used in the composite charted on page 147, and that as a help to measuring price influences it has "proved out" far more accurately than has the velocity of total money. The purpose of this book is not to "settle" questions of high dispute among economists, but merely to supply the layman with rough measuring tools that seem to *work*. In this instance, common-sense intuition about the special price importance of bank loan money seems to be reasonably substantiated by historical facts.

As rough-and-ready guides for the layman, then, we might accept the following measures of the interacting forces affecting the general price level.<sup>1</sup> First, *a comparison of the rate of increase or decrease in spending activity outside of the largely financial New York area with the total bank loans of the country*. Second, *a comparison of total bank deposit money with the monetary gold stock responsible for creating a part of that total money*. What would these two measures show us?

The rate of spending activity outside of New York would give us the rough trend of purely business activity, as distinct from the large financial operations which so heavily dominate the New York

<sup>1</sup> Following the plan of this book, the detailed sources of the figures and the ways of using them are described in the next chapter.

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figures. The comparison of this "mercantile" spending activity with total bank loans would show us whether we were turning over our newly created money as rapidly as our older total. Moreover, under our credit system the volume of bank loans from decade to decade is a rough measure of the growing volume of goods and services.

There are no available monthly estimates of goods and services, and even yearly totals estimated from tangible wealth and from the yearly income derived from "services" are at best hazy. Thus, lacking all accurate clues, we can at least say that sharply declining bank loans indicate a cessation of rapid production of new goods and that rapidly rising bank loans indicate an increasing production rate for new goods. Over longer periods we can also say that the growing volume of bank loans has a reasonable and rough relationship to the productive growth of the country. Thus, when we take the turnover of bank loans, the bank loan item does double duty, as measuring one significant part of our money supply and as a denominator of volume of goods. (Any good statistician could tear this argument to shreds as unsound theory—and I could even do so myself, very easily. Fortunately, however, and for purely practical short-term periods, it seems to *work!*)

Our second suggested measure—comparing total bank deposits with gold stock—is simply one easy way of discounting the effect on prices of the special form of money created by gold and of recognizing

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some effect on general prices of all other forms of money, whether derived from bank loans or bank investments.

In other words, if total deposits rise \$2 billion in a year, but if gold stocks have also increased \$2 billion, then none of the increase in money is due to increased borrowing or investment and all of it is due to the increase in gold. But if total deposits rise \$2 billion while gold reserves are falling off \$1 billion, then the whole money structure is becoming inflated, in the sense that the entire increase in deposits is due to bank loans and investments plus the billion necessary to offset the decrease in gold. We would expect total deposits, let us say, of \$50 billion out of which only \$5 billion is due to gold to have a more direct inflationary effect on prices than a similar total of \$50 billion out of which \$10 billion is due to gold. The historical facts seem to bear out this view.

Of course, a steady and long-continued increase in gold supply compared with deposits may easily lead to *subsequent* increase in bank borrowings and investments—to a temptation to use our greater primary resources in gold to the full limit, to over-expand both borrowing and investment, and hence to an ultimate inflationary influence. In this sense, gold increases may be a source of future inflation, but they do not seem to be inflationary for the moment (in spite of much opinion to the contrary) unless other forms of money, created by borrowing or bank investment, rise even faster than gold. When other forms do not rise proportionately, we

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are, in effect, "sterilizing" the gold for the time being.

Nor am I forgetting that in older days, when precious metals were the chief form of money in current business use, a sudden increase in gold was undoubtedly inflationary, making money (gold) plentiful and cheap compared with goods. But to-day, when nearly 90 per cent of our money is created by bank credit operations, a gold inflow may actually prove a deflationary influence for the time being. At the very least, the evidence from trial and error experiment indicates that deposits largely made up by gold are less inflationary than deposits made up largely by bank credit. For this reason, a constant comparison of total deposits to gold stock is a useful and practical way for the layman to determine the inflationary *quality* of the total money on deposit at any given time.

We have several "case histories" in recent years which help to demonstrate the practical utility of the measures suggested above. Starting with recent times, we have the year 1934 as a particularly good example. This was a year when many of the self-appointed crystal-gazers were predicting sharp inflationary price rises. Hectic warnings were issued to be ready for high shoe prices, high food prices, and high everything else—except, of course, high bond prices. These, presumably, would tumble in a general price inflation. But what actually happened? The chart on page 160 shows what happened to stock, bond, and general prices in 1934.

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In brief, the general price level rose only gently, stocks fell, and bond prices soared! In this confused period, what happened to the suggested measures for general price inflation?

The turnover of loans (spending activity compared with total bank loans) rose for a few months, and

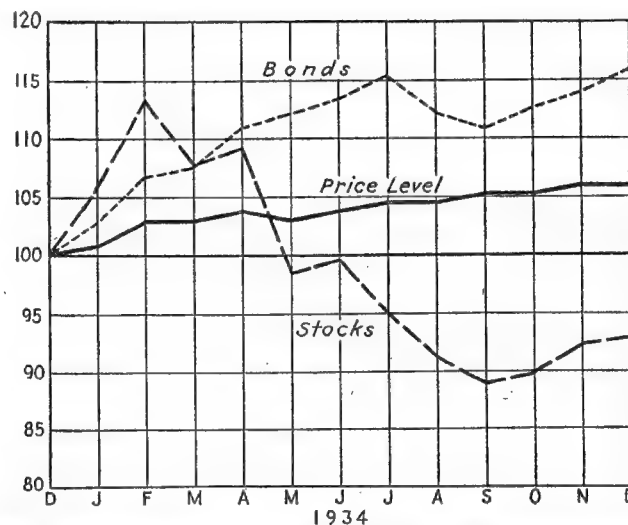


CHART 12.—General prices, stock prices, and bond prices during 1934, with December, 1933, as 100.

then went "flat" to November. But total bank deposits failed to rise sharply when compared with increasing gold stocks. The increased and irregular turnover was greatly modified by the continued deflated *quality* of total deposits. We might note here that both these measures, when combined or offset, move about twice as violently as does the general price level. Thus, mentally, we should esti-



### GENERAL PRICE LEVEL INFLATION

mate their combined movement at about half strength. This is how the two trends compared:

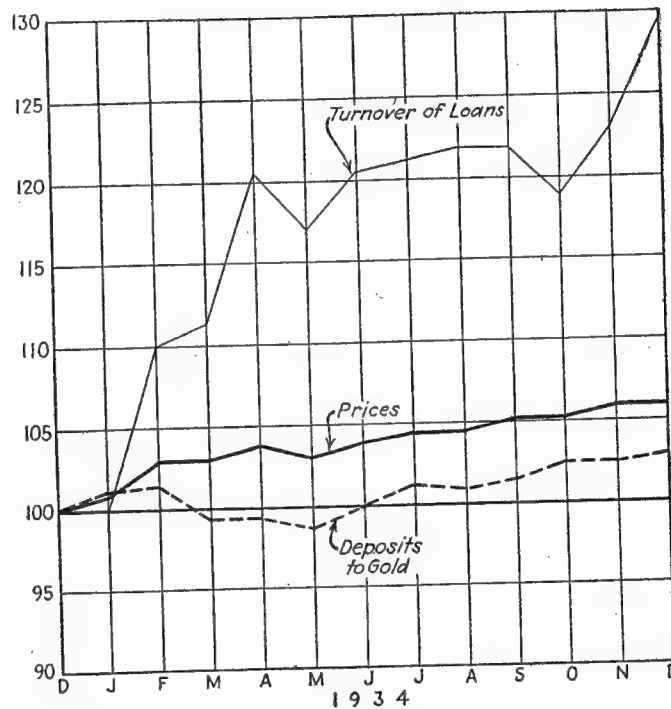


CHART 13a.—General prices, turnover of loans, and deposits to gold during 1934, with December, 1933, as 100.

As a result of all this, the general price level was only 6 per cent higher in December, 1934, than in December, 1933; no runaway inflation, such as the crystal-gazers had fretted about—nothing more than the common-sense response to a greater activity.

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As the second case history we might take the price drops of 1931. During this period the turnover of loans declined sharply, and so did bank deposits compared with gold supply. Thus both the suggested measures showed rapid disintegration at work—and prices dropped 11 per cent, as shown below:

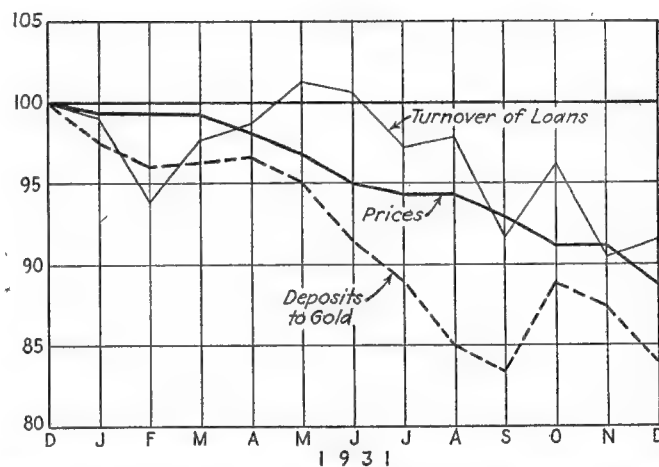


CHART 13b.—General prices, turnover of loans, and deposits to gold during 1931 with December, 1930, as 100.

Small wonder, then, that with a drop in both quantity and velocity of borrowed funds, the cry of the moment was to curtail surpluses of goods—and that within a short time President Hoover's administration recommended "plowing under" every third row of cotton!

But the main point of this case history is that the layman—who might have been deceived by

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the midsummer optimism of the foreign "moratorium" period—could have measured the depressing facts for himself. From May, 1931, just before the "moratorium," to August the turnover of borrowed funds failed to increase. Gold began to flow out of the country, but deposits fell even faster than the gold stock. Inexorable forces were at work—and their nature was plain in the published figures, available to everyone, and needing only simple arithmetic to tell their story to the layman as well as to heads of government.

Going back for a third important case history to 1919–1922, we find in the second half of 1920 and in early 1921 the most spectacular general price decline since the Civil War. From a high point of post-war price inflation in June of 1920, prices dropped no less than 30 per cent in twelve months, bringing enormous injury to every business requiring large inventories of goods and a most painful situation for debtors—their debts in dollars remaining fixed while the value of their assets slid and crashed. Did the layman have any warning of the collapse?

In this period (from December, 1919) spending activity, which had risen 25 per cent during 1919, suddenly went flat. It did not decline at once, but it ceased to rise in spite of a continued sharp rise in loans. Thus the *turnover* of loans *did* drop, and very sharply. Bank deposits continued to rise for a few months, especially compared with a marked decline in gold stocks. But this rise was by no means enough to offset the almost vertical decline in turnover—as shown on the chart on page 164.

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By July, as the chart shows, *both* the turnover of loans and the comparisons of deposits with gold were declining together. Both forces were now sharply deflationary, giving no hope to the harassed holders of inventory. It was not until the second quarter of 1921 that these forces, starting with turnover, began to steady themselves and give

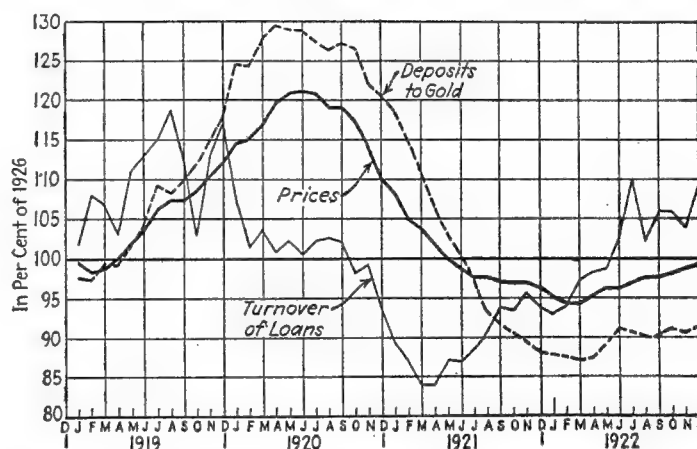


CHART 13c.—General prices, turnover of loans, and deposits to gold during 1919–1922, with December, 1918, as 100.

support for the price movements in later 1921 and 1922.

Neither these case histories nor the composite of similar forces charted on page 147 would satisfy the exacting theoretical economist. They are not intended to. The economist can argue—and soundly—that there are very long-term trends or cycles in prices whose contributing causes we cannot easily detect from merely current banking figures.

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Historically, for instance, there have been periods when sharp and spectacular increases in the world's gold supplies have exerted a universal stimulus on price levels and on the prosperity of whole sections of the globe—also periods of new forces released by science and invention, wars and new alignments of monetary supremacy as between leading nations, and slow changes in the proportion of business conducted through banks.

But for the relatively short-term requirements of the average businessman, seeking some logic for his plans for the next few months, the banking measurements outlined above seem to be astonishingly helpful (except, possibly, in war periods<sup>1</sup>), both as a positive guide and as a negative antidote to the conflicting opinions which beset the layman from every page of his newspaper in moments of real or imaginary crisis.

The next chapter will show in practical detail just what figures the layman should look for and how he should use them to estimate for himself the probable near-term trend of general prices.

<sup>1</sup> In war periods, when the government may act as purchasing agent for allied powers, etc., bank debits no longer fully reflect actual trade.



## CHAPTER X

### *Measuring Price Level Inflation*

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IN the preceding chapter we looked into some of the broad influences constantly at work to raise or lower the general price level. We have considered the special quality of "money" as a one-sided debt that can be settled only with the consent of the creditor, and why this special quality makes its *rate of spending* quite as important as its *total quantity*. We have also examined the different *kinds* of money: primary money (chiefly gold), which, being a valuable commodity itself, involves no borrowing; money created by bank investments, which *involves no new debt* for its creation; money created by bank loans, which does involve a new dollar of debt for each new dollar of deposit money created.

This brought us to the suggestion of two practical measures for determining—at least over short periods—whether the forces at work at any given time should tend to raise or lower general prices. These measures were:

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First: A comparison of spending activity outside of the New York area with the bank loans for the entire country.

Second: A comparison of total deposit money with the total monetary gold stock of the country.

I want to make it doubly clear that a trained statistician, with available sources for complete figures of all sorts, could use far more sensitive and accurate measures than these. But our main purpose always is to find measurements for which the layman can find the necessary figures in his newspaper. Newspapers rarely carry the full figures for the weekly bank reports, so that to attempt measurements other than those suggested would require getting the original reports from the Federal Reserve Board, and having on hand the similar reports for earlier years. For the past eighteen years or so, the measures suggested have been sufficient to indicate a *trend comparable* with that in general prices. But just how do we select and use the needed figures?

Our first item to establish is the rate of spending activity outside of the New York area. We get this, of course, from the weekly or monthly "bank debits" reports, as explained in the chapter on equity price inflation. But how can we separate the New York spending figures from those of the rest of the country?

In the Federal Reserve Bulletin, and in the mimeograph reports sent to newspapers and others by the Reserve Board, the separation of New York City figures is complete. But the newspapers do not

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carry the complete reports. They merely give the total for the country and then the separate totals for the twelve Federal Reserve districts. One of these is the New York District, which, of course, includes many cities and areas outside of New York City itself. Nevertheless, for all practical purposes the trends for the New York District and for New York City are so very similar (the city making up about 95 per cent of the total for the district) that we shall never be far wrong if we simply subtract from the total for the country the separate total for the New York Reserve District.

For present purposes the report to use is the *monthly* report (usually published on the second Wednesday of each month) which gives the total spending for the 141 cities which have been carried as a continuous series since 1919. This report gives the monthly total for the entire group of cities, and also the total for the same cities separated into Federal Reserve districts. Furthermore, it gives the same sets of figures for the corresponding month a year earlier.

Our next important measuring figure—the one we must compare with the mercantile rate of spending—is that for bank loans, representing the part of our total bank deposits created by new debts. In theory we should compare spending outside of New York with bank loans outside of New York. But the newspapers do not carry the year-to-year comparisons on the figures for loans outside of New York. Moreover, loans made for purely financial purposes in New York do, in a sense, draw money

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away from trade channels, so that there is some benefit in including them in any comparison with mercantile spending. For practical purposes, then (and also to satisfy the more fine-spun type of theory which it is unnecessary to go into for present purposes), we can simply take from the weekly member bank report the figure for total loans.

When loans begin to rise more rapidly than spending, it is a pretty good indication that industrial output is being increased in anticipation of sales that never materialize; that is, that the volume of goods is rising faster than the rate of consumption of those goods. Or, at least, if a large part of the increased loans is financial in character, we have an indication that money which might stimulate general prices is being withdrawn from commercial trade and used to a greater extent than formerly in purely financial operations. On the first assumption, money claims are not being "called" as rapidly as new goods are being created, which would tend to depress prices. On the second assumption, not enough of the new money created by borrowing is being used in commerce to stimulate general prices. We also know that borrowing for speculative purposes, or for excessive inventories, means withholding goods from circulation and consumption, and that this must, in the end, slow down relative trade activity. Whatever way we look at it, borrowed funds are not being used to advantage for maintaining the general price level of goods and services.

From the wholly theoretical view (based on the quantity theory of money with certain modifica-

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tions) we could say that, although the quantity of money had been increased or sustained by borrowing, the velocity of the new total was not so great per dollar as the velocity of the former total. Thus, whether we prefer the practical or the theoretical explanation, the fact seems to remain that this measurement does, in practice, give us a helpful guide to one of the current forces tending to raise or lower general prices. We cannot take it alone; we must always compare it with the second measure we are about to consider. But by itself it has great importance, is readily available to the layman in his newspaper, and demands only a few minutes of his time once a month to reduce to a definite figure.

We now come to the second measure of major influence on general prices; the comparison of total deposit money with the total monetary gold stock of the country. The purpose of the comparison, it will be recalled, is to show what proportion of a given total of deposit money is due to the receipt or accumulation of gold, and what proportion to bank borrowings or to bank investments. Thus, in effect, we are allowing for the different *quality* from month to month of a given total of bank deposit money, for the proportion based on debt as distinct from the proportion based on gold as an inherently valuable commodity.

To arrive properly at this figure we ought to use not merely the deposits of weekly reporting banks, but also deposits of all other commercial banks. The weekly reporting banks in 1936 held only about 56 per cent of the total deposits of the country.

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But a few years ago they held an even smaller proportion. It is obviously inaccurate to compare *total* gold stock with only 56 per cent of total deposits. But, unfortunately, the figures for all commercial banks are published only once a year by the Comptroller of the Currency. This makes them difficult for the layman to follow. Hence, for practical rough-and-ready purposes, the best figure for the layman to follow from his newspaper is the comparison of deposits in the weekly reporting banks with total gold stock. The *trend*, at least, will not be far different for short periods from the figure for total bank deposits to gold. Only the proportion will be radically different.¹

How, then, could we arrive at some reasonable conclusion as to inflationary or deflationary forces at work on general prices? We might have, let us say, by October of a given year a *declining* trend in our measure of spending compared with borrowing. We might also have a *declining* trend in our measure of deposits to gold. Both factors, then, would be working toward declining price levels.

But let us assume that by December we have resumed a sharply *rising* trend in our measure of spending to borrowing, whereas our measure of deposits to gold continues unchanged, or shows only a

¹ Obviously, for the trained statistician, if reporting banks today hold 56 per cent of deposits, it is simple to compare this with 56 per cent of our present gold stock to get correct proportions. But a year from now, reporting banks may hold 60 per cent of total deposits. Unless the layman could follow the Comptroller's infrequent reports, he would have no way of knowing about this change in proportions and making proper allowance for it.

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slight drop. In that case we would be justified in assuming that the rising velocity was sufficient to offset the continued deflationary quality of our money, and that general prices might remain firm or even advance fractionally.

Let me emphasize once more that we are not discussing commodity prices only, but also the entire range of general prices entering into the business and living transactions of the nation. A shortage in certain crops, labor disturbances causing a temporary shortage in certain lines of goods, buying demand from foreign countries for raw materials for war purposes—all these and many more similar conditions might at any time bring a price rise in several important commodities without seriously affecting the general price level and the average cost of living.

What the average citizen wants to know concerning general prices is simply whether or not the signs point to a “runaway” price inflation or a “slide-away” price deflation. For this purpose a comparison of the two measures just described should prove highly useful and practical (see Chart 14, page 173).

But there are other and broader conditions—the *relative inflations* referred to in the introduction to this book—which are also of the deepest concern to every intelligent citizen. The remaining chapters of this book deal with these more generalized conditions—debt compared with wealth, interest charges compared with income, and above all, cost of living compared with income. Ultimately, the changes in these basic relationships account for most of the

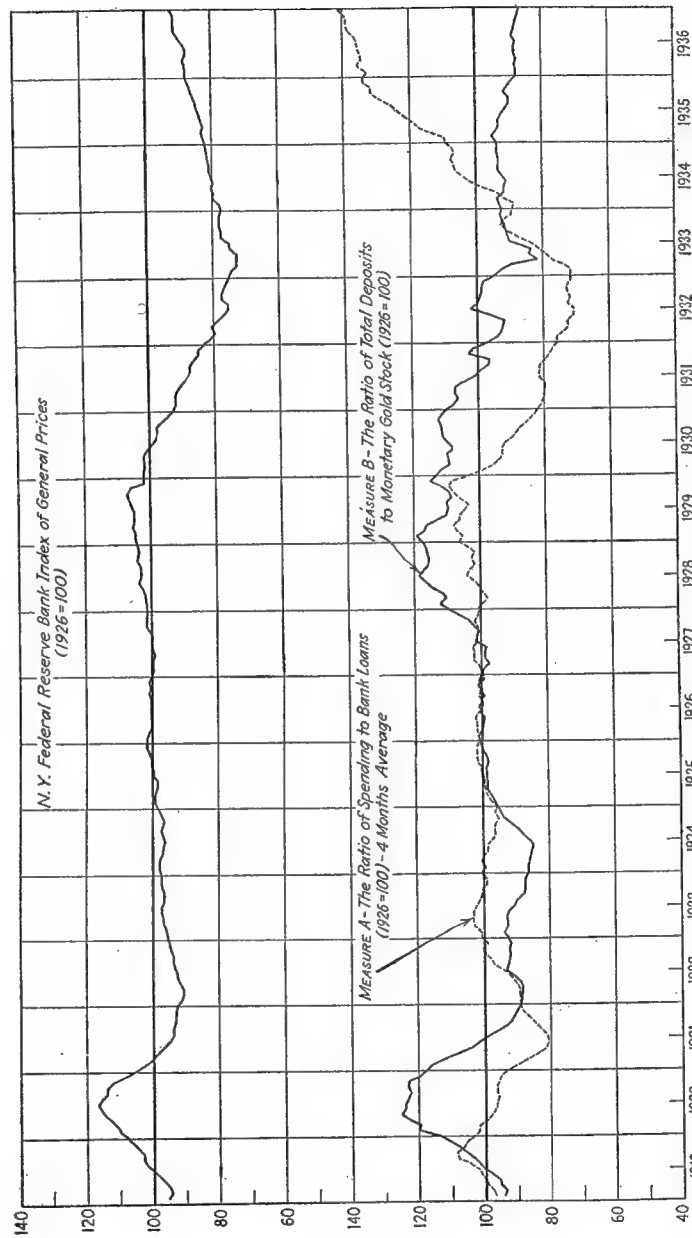


CHART 14.—Suggested measures compared with the general price level.

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alternating hope and despair in our civilization. We must all know how to measure these changes if we are to understand the deeper problems of our future. If what we understand as civilization is to survive, the next generation must be equipped to meet these changes and to strike at the conditions underlying them with the utmost candor, conservatism, and rugged good sense.

The Arithmetic of the Measures

A. The Ratio of Spending (outside of New York) to Bank Loans.

As explained above in this chapter, mercantile spending outside of New York City can be easily approximated by subtracting from the total monthly spending for the country the separately reported spending for the New York Federal Reserve District. The way these items are separated can be seen by a glance at the sample debits report for the month of October, 1936, reproduced on page 131.

Using this sample report again for illustration, we find:

October debits total.....	\$37.312 billion
Less N. Y. District debits (No. 2).....	17.889
Debits "ex-New York".....	\$19.423

For October, 1935, we find in the same report (right-hand column):

October debits total.....	\$32.576 billion
Less N. Y. District (No. 2).....	16.362
Debits "ex-New York".....	\$16.214

From this illustration we will note at once that the percentage gains over the year vary as follows:

	1935	1936	Per cent change
1. Entire country.....	32.576	37.312	+14.6
2. New York District.....	16.362	17.889	+ 9.3
3. Ex-New York District.....	16.214	19.423	+19.8

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It is because of these frequently wide variations between the mercantile spending changes outside of New York, compared with the changes in the primarily financial spending within New York, that the so-called ex-New York figures have so much significance for purely business trends.

These ex-New York debits should be further adjusted by a seasonal factor, as explained on page 131 for total debits—that is, dividing each month's total by the seasonal factor for that month. A table of approximate seasonal factors for ex-New York debits follows:

Month	Seasonal factor
January.....	106
February.....	90
March.....	102
April.....	101
May.....	100
June.....	102
July.....	100
August.....	93
September.....	94
October.....	107
November.....	96
December.....	109
Total.....	$\frac{1200}{12} = 100$ average
Divided by 12 (months).....	

Thus, we get seasonally adjusted totals for ex-New York debits for October, 1935 and 1936, as follows:

For 1935:

$$\begin{array}{l} \text{Ex-New York debits, "raw"} \quad 16.214 \\ \text{Divided by October factor} \quad \frac{107}{107} = 15.153 \end{array}$$

For 1936:

$$\begin{array}{l} \text{Ex-New York debits, "raw"} \quad 19.423 \\ \text{Divided by October factor} \quad \frac{107}{107} = 18.152 \end{array}$$

To get our figure for total bank loans (including New York) we go through the same process outlined on page 90, and subtract all

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securities from total loans and investments of the member bank report, obtaining (for October, 1935 and 1936) totals of \$7.902 billion and \$8.721 billion, respectively.

We are now ready to take the ratio of adjusted ex-New York debits to total loans for both years, as follows:

For 1935:

$$\begin{array}{l} \text{Debits} \quad \quad \quad 15.153 \\ \text{Divided by loans} \quad 7.902 \end{array} = 1.918 \text{ or } 191.8 \text{ per cent}$$

For 1936:

$$\begin{array}{l} \text{Debits} \quad \quad \quad 18.152 \\ \text{Divided by loans} \quad 8.721 \end{array} = 2.081 \text{ or } 208.1 \text{ per cent}$$

In this case we have an increase in the ratio (velocity) of 8.5 per cent in one year, which, by itself, would indicate a velocity stimulant to prices, for reasons explained in this and the previous chapter.

This velocity ratio for 1926 was 1.509 (or 15.09 per cent) so that we can make an index of our current ratios by dividing them by this 1926 ratio. Thus:

For 1935:

$$\begin{array}{l} \text{October ratio} \quad \quad \quad 1.918 \\ \text{Divided by 1926 ratio} \quad 1.509 \end{array} = 1.271 \text{ or } 127.1 \text{ per cent}$$

For 1936:

$$\begin{array}{l} \text{October ratio} \quad \quad \quad 2.081 \\ \text{Divided by 1926 ratio} \quad 1.509 \end{array} = 1.379 \text{ or } 137.9 \text{ per cent}$$

Obviously, 1936 price levels were not 37.9 per cent above 1926. This makes it quite evident that another factor of *deflationary* character was at work, and this, in a rough way, will be found in our next suggested measurement.

B. The Ratio of Total Deposits to Monetary Gold Stock.

As explained previously, a still more satisfactory measure for this purpose would be total bank deposits (for *all* banks in the country) plus total currency in circulation compared to gold stock. But since this is unobtainable in ordinary newspaper reports, we must be satisfied for the present purposes with total weekly reporting member bank deposits to total gold.

In the "arithmetic notes" to Chapter VIII, page 136, the method was explained for finding gold stock figures and converting them into

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dollars of the "old" gold price. The sample figures obtained for October, 1935 and 1936, were \$5.724 billion and \$6.519 billion, respectively.

Similarly, in measuring the inflation of bond prices on pages 72-74 of Chapter V, we found that October, 1935 and 1936, figures for gross deposits were \$24.641 billion and \$27.617 billion, respectively.

These are the only figures we need to make our ratio, thus:

For 1935:

$$\frac{\text{Gross deposits } \$24.641}{\text{Divided by gold } 5.724} = 4.305 \text{ or } 430.5 \text{ per cent}$$

For 1936:

$$\frac{\text{Gross deposits } \$27.617}{\text{Divided by gold } 6.519} = 4.236 \text{ or } 423.6 \text{ per cent}$$

So we find that this ratio had declined about 1.6 per cent during the year, as a mild offset to the 8.5 per cent rise in velocity (measure A).

To reduce the deposit to gold ratio to a 1926 index, we merely divide the current ratios by the 1926 ratio, which was 4.824. Thus:

$$\frac{\text{Ratio for October, 1935 } 4.305}{\text{Divided by 1926 ratio } 4.824} = 0.892 \text{ or } 89.2 \text{ per cent}$$

$$\frac{\text{Ratio for October, 1936 } 4.236}{\text{Divided by 1926 ratio } 4.824} = 0.878 \text{ or } 87.8 \text{ per cent}$$

SUMMARY

On an index basis, we find the following changes between 1926 and 1936:

	1926	1936	Per cent change
1. Measure A (velocity).....	100.0	137.9	+37.9
2. Measure B (monetary inflation)....	100.0	87.8	-12.2

Now—since a *drop* of 12.2 per cent is the opposite (or offset) of a rise of approximately 13.9 per cent (see table on page 137), we would subtract 13.9 per cent from the 37.9 per cent gain in velocity and arrive at a

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net gain of 24.0 per cent. Then we would cut this final figure *in half*—making it +12.0 per cent.¹

This, of course, is still too high, since general prices have not yet returned to 1926 levels. If, however, instead of the above inflation measure, we used the ratio of total deposits in *all* banks plus currency to gold (see page 128), we would find an offset to velocity of -26.2, and would subtract from the 37.9 per cent gain in velocity an offset figure of 35.5 (the opposite of -26.2) and arrive at a *net* figure of +2.4 per cent, or, when *cut in half*, +1.2 per cent—which would be much more nearly correct.

This difference is explained by the fact that deposits in weekly reporting banks have risen much more rapidly than deposits in *all* banks. Our *total* bank money was much more deflated in October, 1936, than the part of it represented by reporting banks only.

In spite of this difficulty, the two "newspaper measures" suggested are most helpful in estimating the basic up or down *trend* in general prices—leaving long-term *levels* to be measured more accurately by other methods not easily available to newspaper readers. The important thing to remember is to cut the final offset figure in half.

If the newspaper reader keeps track of these figures monthly, it will be wise to "smooth out" the debits to loans ratio (A) by keeping it in the form of a four months' average. This simply means adding together the index figure for the current month and the figures for the three previous months and dividing the total by four. Thus, if a December index of the ratio is 145, we add that to a November figure of (say) 141.5, an October figure of 132.9, and a September figure of 140, making a total of 559.4. Dividing this by four gives us 139.8 as the "moving average" figure for that December.

¹ The general method of roughly estimating offsets is described in detail on pages 139 to 141.

CHAPTER XI

Decades of Debt

FROM all the discussion of "absolute" inflations in our preceding chapters, it is hard to escape one major conclusion—that debt, in all its forms and expressions, plays a stupendous role in affecting the material values men live by and work for.

Yet most of the discussions of our modern system and of its supposed moral benefits to the "rugged individual" direct the chief emphasis toward *ownership*. It is "good for a man" to own his own home. It is good for a man to own his own business, or at least a stockholder's share in some business. It is natural and desirable for men to accumulate ownership of the tangible goods of this world—of land and of the means of creative production. This is the theme of modern society's defense of its system against communism. The stress is wholly upon the human importance of private ownership of goods and of the means of producing more goods.

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Yet, when we come to examine the things that affect ownership most intimately, we find that debt rules the roost—that the comparison between this or that kind of ownership and this or that kind of debtorship seems to affect with inexorable logic the price or current exchange value of ownership. The money owned by bank depositors, for instance, when compared with the amount owed, affects the interest rate and with it the price of ownership shares in industry. The rate of public spending activity assumes its most helpful aspect only when compared with what the public owes. If spending increases faster than borrowing, the earnings and the price values of ownership shares tend to increase. If borrowings rise faster than the rate of spending, then earnings and values tend to decline. Even money itself, as we have seen, being a demand claim on goods, exerts an almost unique influence as a form of debt upon the market price of goods and services. Whether we like to admit it or not, we seem to live in an economic world built on debt, by debt, and for debt quite as much as in a world built on private ownership of goods and its strong moral corollaries of accepted risk and accepted responsibility.

In other words, we live in a dual or divided system of ownership, the ownership of goods being at all times poised against the ownership of claims on money, or debt. We have owners of debts (including money) and owners of goods. At certain times, as we have seen, the comparison of ownership with creditorship sets at work forces favorable to owners of goods. At other times the comparison starts forces

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destructive of ownership. At still other times (as in 1931 and 1932) the comparison reveals, like some mysterious retribution, forces that engulf both debtors and creditors, so great is the interdependence of one upon the other. But we cannot say that our modern system is "based on private ownership." That is pure fable and myth. The modern capitalist world is only one-half ownership; the other half is creditorship.

It ought to be possible, then, to tell the story of the modern world largely in terms of ownership wealth and creditorship claims on wealth. It ought to be possible—and I think it is. At least we can tell that part of the story which concerns the passing from many decades of "rugged individualism" to a decade of increasing ownership timidity and a growing desire to make ownership "safe" by placing it under the strong protection of government. In other words, we can trace the outlines of growing "creditor dominance" in our national affairs, and the instinctive appeal of the masses of ordinary individuals to government for protection against that dominance. This is one major form of "relative" inflation.¹

To start the story in practical terms, we can begin by taking inventory of the tangible things we owned just prior to the World War in 1914. The National Industrial Conference Board (which I shall call simply the Conference Board hereafter) is an excellent organization, largely supported by industry itself and entirely nonpolitical, which makes many

¹ For chart of all three relative inflations see Chart 15, page 182.

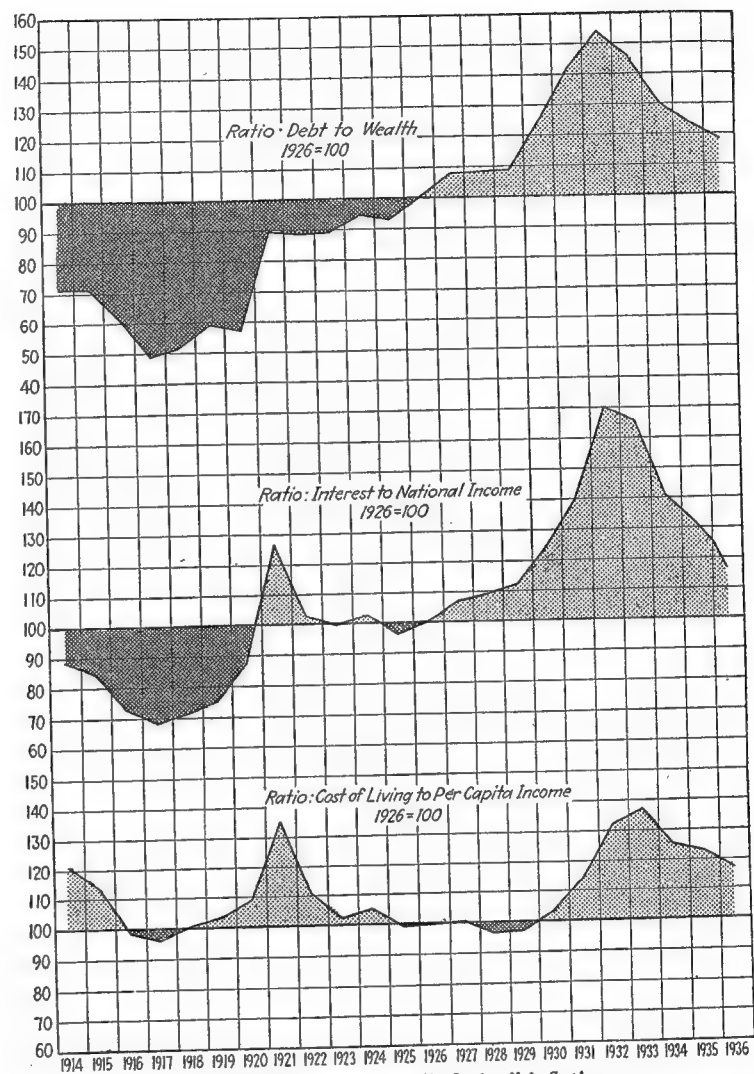


CHART 15.—Three major “relative” inflations.

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extremely valuable studies of long-term conditions affecting business. Not all statisticians and economists will agree with all their methods of study and estimate in detail. But for the practical purposes of the layman that is far less important than the fact that the Conference Board has been making these studies continuously for years, has acquired expertness in its technique, and has made the results of its studies easily available in book form and in comparable figures. Among its major studies is one on national wealth—a sort of national annual appraisal in which only tangible wealth is taken into account. The figure each year is simply its combined appraisal at present prices of farm and city land and buildings, of factories, mines, quarries, railroads, utilities, of inventories of finished and unfinished goods on hand, and all other tangible items that can reasonably be estimated at all. The Conference Board's appraisal of national wealth in 1914 was \$180.6 billion.

This figure represents what the people of the United States, individually and collectively, then owned. But what claims did the creditors own? What proportion did all the debt claims of 1914 bear to the current value of all goods and property owned? In brief, what was the creditor dominance in the United States in 1914?

Again the Conference Board comes to our rescue with a careful estimate of all private long-term debt on record in that year; an estimate, that is, of bonds and mortgage notes and all debt in general that was not due and payable in less than five years. The

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figure arrived at is \$33.3 billion. That, at least, was one large part of the debt total.

Then we had, in all banks, loans outstanding (exclusive of mortgages already included) to the extent of approximately \$11.1 billion. We also had a small Federal government debt of approximately \$1.0 billion. Our cities, states, and counties had incurred a total indebtedness of about \$4.5 billion. Those are the only items on which we can be reasonably certain. We have no record of the probably huge volume of unrecorded private debts, notes given from private borrower to private lender, current account debts at stores or sources of factory supply, and installment purchase debts. We can keep this vague total in mind as increasing the real size of any debt total we fix. But for practical purposes we can sum up the totals for private long-term debt, for government debt, both national and local, and known bank loan debt. In this case the total comes to \$49.9 billion.

Thus, if we divide our 1914 debt total of \$49.9 billion by our 1914 wealth appraisal of \$180.6 billion, we find that the dollar value of our debt claims then equaled roundly 27.6 per cent of the dollar value of our national wealth. If the creditors had wanted to, and had been able to "cash in" on the value of their debt claims, they could have purchased or "taken over" considerably less than a third of our tangible property. As this might be stated in brokerage house terms, we were operating, as owners, on a fairly substantial "margin." (See Chart 16 on page 185.)

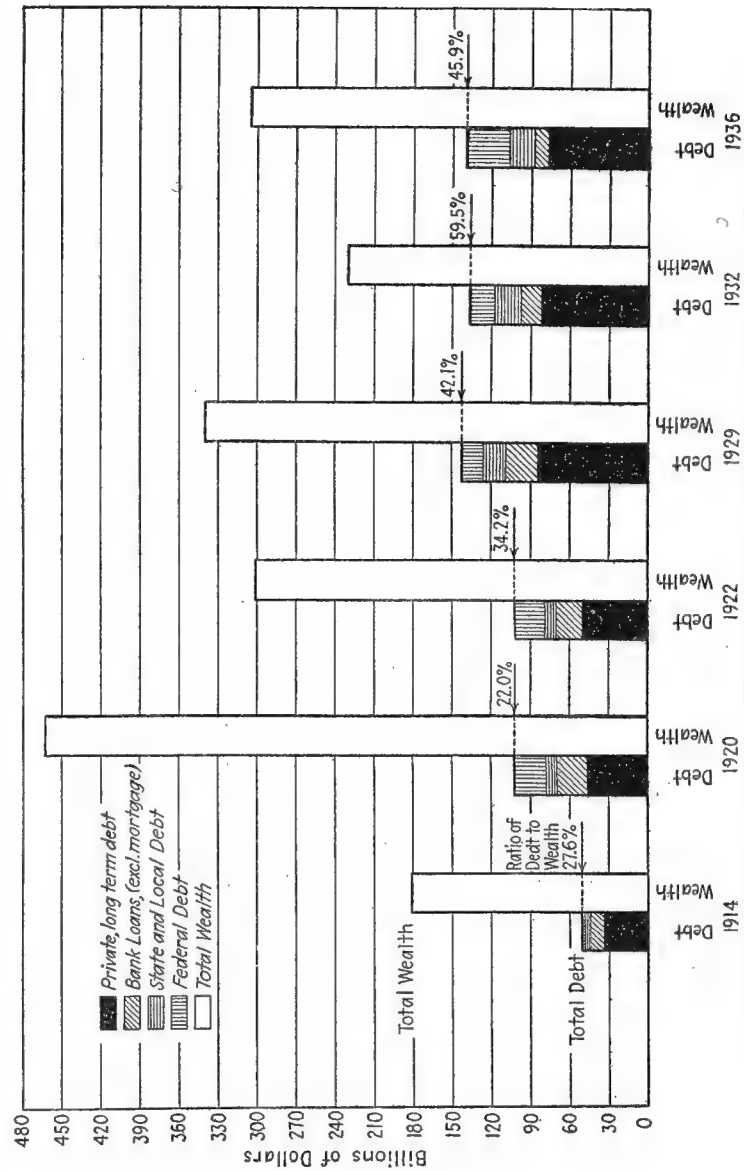


CHART 16.—A comparison between total debt by kinds, and national wealth for important years.

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Jumping from 1914 to the effective conclusion of the war period in 1920, after we had had our enthusiastic boom and borrowed additional funds here to help out Europe, what change do we find in creditor dominance?

By this time our wealth in current dollar values had risen enormously. In terms of volume of goods, factories, railroads, etc., there was a substantial increase, no doubt; probably as high as 130 per cent over 1914. But in the inflated dollars of that day the Conference Board estimates the total wealth at no less than \$463.1 billion.

In the meantime, what had happened to debt claims? The Conference Board's figure on private long-term debt was now \$46.2 billion. Federal debt had risen to \$24.0 billion. Local debt had increased to \$7.3 billion, and total bank loans (always excluding mortgages) stood at \$24.6 billion. This all added up to \$102.1 billion—an increase over 1914 of 104.6 per cent. But the dollar value of our national wealth had risen even faster, so that total debt claims now constituted only 22.0 per cent of our wealth. Creditor dominance, thanks to a wild price rise in ownership items, had fallen off since 1914.

But the price *rise* of the postwar period turned into one of the most spectacular price *drops* in our history in 1921 and even into 1922. Dollar values disappeared from week to week and month to month. By 1922 the Conference Board could estimate our wealth in the new low prices at only \$301.3 billion.

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But debts did not decrease. Private long-term debt continued to climb and in 1922 stood at \$50.7 billion. The Federal debt declined to \$22.7 billion. State and local debt increased to nearly \$8.6 billion, and bank loans remained quite high at \$20.9 billion. The grand total stood at \$102.9 billion, showing a fractional increase over 1920.

Thus, by 1922 debt claims had risen to more than a third (or 34.2 per cent) of the value of our national wealth, an important increase not only over 1920 but also over 1914. Our "margin" was thinning!

Then what happened? Our natural expectancy would be that with stable prices, rising industrial production, increased earnings and the higher appraisal values which those earnings justified, creditor dominance would again decline. All the outward circumstances favored a gain in the position of owners. From 1922 to 1929 national wealth rose from \$301.3 to \$340 billion wholly without benefit of any rise in commodity prices. Owners should have been able to consolidate their position. But they did no such thing. Debt claims greatly out-paced ownership values!

By 1929 private long-term debt had risen to \$84.2 billion—a gain of more than 66 per cent over 1922. State and local debt had risen to about \$16.7 billion. Bank loan debt had increased to \$25.5 billion. Only the Federal government debt showed a decline, having dropped to \$16.6 billion. The grand total for 1929 stood at \$143 billion, showing an increase over 1922 of 39 per cent. The value of 1929

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debt claims amounted roundly to 42.1 per cent of the value of national wealth! Nothing could illustrate more clearly the unsound nature of the boom period from 1922 to 1929 than this gradually increasing creditor dominance throughout the entire period.

To put the whole picture another way, suppose we give for these various years the percentage of national wealth which remained *as true equity* for owners after deducting the value of all outstanding debt claims against that ownership. Then the story would tabulate as follows:

In 1914, out of total wealth of \$180.6 billion, the true equity of owners was.....	72.4%
In 1920, out of total wealth of \$463.1 billion, the true equity of owners was.....	78.0%
In 1922, out of total wealth of \$301.3 billion, the true equity of owners was.....	65.8%
In 1929, out of total wealth of \$340 billion, the true equity of owners was.....	57.9%

Thus the net result of sixteen years of war activity, of postwar boom and collapse, and of subsequent loudly heralded prosperity was to cut the equity of owners in our national wealth from over 72 per cent of the total to less than 58 per cent—a “squeezing out” of almost 20 per cent of the ownership equity of 1914. Considering the shortness of the time in comparison with our national history, this was an astounding blow at ownership, “the basis of our modern system.” As the inverse of this picture, creditorship had increased its dominance over our national life from less than 28 per cent of our wealth to more than 42 per cent.

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But despite the spectacular nature of this creeping victory of creditorship (the "other half" of the divided house of modern capitalism), it was only a mild and unobtrusive victory compared with the results of the smashing advance of the next three years. How did owners stand in 1932?

With the combined drop in prices, activity and earnings in this catastrophic period, the Conference Board appraisal of national wealth dropped to \$230.6 billion. The physical assets were still there, but the price values had shrunk some 28 per cent since 1929.

But the face value of debts had shrunk only a bit more than 4 per cent! Private long term debt had declined slightly to stand at \$81.8 billion. But state and local debt had risen to about \$19.6 billion, and Federal debt had risen to \$19.2 billion. Bank loan debt aggregated \$16.5 billion. The grand total stood at \$137.1 billion—or *more than 59 per cent of the value of our entire ownership wealth!*

In less than two decades the equity of rugged individual owners had dropped from over 72 per cent of their gross wealth to only 40.5 per cent! The stalwart average individual of 1914 who owned \$100 worth of goods and considered himself the very spine of modern capitalism had a solid and comforting equity of \$72.40 in those goods. The major claims on physical wealth were ownership claims. The owner not only thought he was the spine of the system—he was! But by 1932, only nineteen years later, for every \$100 worth of goods he still owned he now had an equity of only \$40.80. Creditorship

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now dominated the scene. Its claims on physical wealth now constituted "the majority." Is it any wonder that the former spine of the system now ran to the doctor—the State—to get braces for his spine?

We cannot pass lightly over this 1932 picture. It has a profound significance. First of all, we must remember that this astonishing growth in creditor dominance was achieved while more than half the farm lands of the country remained unmortgaged, and while a great majority of our large industrial concerns had a very low proportion of bonded or funded debt. Thus the *average* position of the entire nation of owners barely hints at the truly perilous position of the large body of individual owners who were directly in debt.

Then, as a second aspect, we must understand clearly just how the average position actually applied to every owner in the land, whether he was directly in debt or not.

Most of us live in a proud and splendid isolation in our ideas about personal indebtedness. We reckon only with our personal debts—like the owner of many shares of New York Central stock who proclaimed in 1932 that he did not have a debt in the world! He forgot that as part owner of the New York Central Railroad he owed his share of the \$60 million of annual interest and his share of the \$1.2 billion of principal debt of that road. He forgot that, were it not for his share of that debt and interest, he would have been receiving dividends on his Central stock, even in 1932. He was paying interest—but did not know it!

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But the general involvement in debt goes further than that. It is literally and exactly true that every one of us must pay and does pay his proportionate share of the entire aggregate indebtedness of the country. Consider the manufacturer who borrows money at certain seasons of the year to buy raw materials or to tide over the period between manufacture and ultimate sale of his goods. Where does he get the money to pay back the principal of the loan and the interest? From the buying public, of course. The manufacturer puts down interest paid as one of his manufacturing costs, and sets a price on his goods that will include this cost. Every time we buy a chair or an automobile, or a radio or a can of tomatoes or a pair of shoes, we are helping some manufacturer or raw material supplier, or jobber or distributor, to cover the interest costs incurred at some stage of production and sale.

Every time we buy a share of stock on the stock exchange, we are helping someone along the line to meet an interest charge on money borrowed against securities. Even if the previous owner sells at a loss, this remains true. Loss or no loss, he must deduct his interest payments due before receiving his final net payment. Part of the money we pay him goes to meet interest. And if the stress of meeting interest and principal payments becomes too heavy, there is pressure on the prices of stocks all along the list, so that we pay the bill in the reduced market value of our own holdings even when we indulge in no transactions of our own.

The same principle applies even to installment purchase debts incurred by people of modest salaries.

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Who provides—through purchase of goods or services—the money with which that person's salary is paid? We, the public. If we did not, his salary would cease and he would be unable to incur his installment loans.

In the case of national, state, and local debt, the public's share in the total is more obvious. It comes in direct and indirect, or "hidden," taxation. It comes in income and property taxes. It comes when the "tax-exempt" rent payer sends his monthly check to a landlord who, in turn, uses part of that check to meet local real-estate taxes and perhaps part of his own income tax.

It is no trick of figure juggling to make a total of all ascertainable debt, and to balance that against total tangible wealth. The purpose is not merely to strike a theoretical "average," but to arrive at a true estimate of each and every man's actual share in the total obligations to creditors.

Nor does it make any difference that many thousands of people *are both owners and creditors* in the direct sense, that many people own a house and land and at the same time hold the mortgage notes or bonds of someone else. A savings bank depositor may "own" his own house on a conservative mortgage held by the very same bank in which he deposits. As a depositor, his own mortgage becomes part of his security. In some degree or other, he is literally paying interest to himself! But all this inner complexity does not alter the simple fact that increasing creditorship claims diminish the equity of ownership claims, and so change the whole

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weight and proportion of our divided house of "ownership capitalism" on one side and "creditorship capitalism" on the other.

With these points well in mind, we can begin to understand the true enormity of the creditor dominance of 1932 in its combined effects on the basic position of all owners. In that year a wide majority of the tangible wealth of the country was *potentially* in the hands of creditors. The equity of owners, as a class, in our national wealth was far less than half the total. *The continuity of ownership*, as a basic idea of our system and state, *was in dire jeopardy*.

The social and political consequences of this are easy to imagine. In plain language, owners as a class had become so "overextended" or inflated that their very existence was threatened. To be sure, the owners themselves were probably to blame for their low estate. People borrow money to make money. They borrow at 6 per cent in the hope of earning 8 or 10 per cent on the borrowed funds. Or, they borrow \$1,000 to buy land or goods in the hope that they will later sell the property for much more than the borrowed amount. The real tragedy of the divided house of the modern system lies in the fact that both owners and creditors are incited to increased greed at one stage or another of the ebb and flow tides.

Creditor dominance grows in times of falling prices and falling activity. Ownership profits and advantages rise in times of rising activity and values. A true balance is never reached in a world of affairs that never stands still. Creditor dominance

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grew from 1922 to 1929 only because owners were greedy to borrow more and more money. Had they added nothing to their borrowings in this period, prosperity would have worked to their advantage. But their own greed "sold them out." After that, from 1929 to 1932, it was falling prices and activity that gave creditors their ultimate and full majority dominance.

But distributing the "blame" does not alter the social consequences. The overextended, wildly inflated owners of 1932 sought protection. They felt that *their kind* of capitalism—the whole principle of continuous private ownership—was doomed. Against the totality of creditorship, owners needed a champion—and, of course, the only champion of sufficient size and strength on the horizon seemed to be the Federal government.

Thus a factual study of creditor dominance since 1914 goes far to explain the state of mind of the owning class, of farmers and homeowners and of businesses small and large, in 1932. It explains, as nothing else could, the resort to the strong centralized Federal government as a champion of the ownership system against the creditor system. It explains why the rugged individualists of 1914, then operating on a comfortably wide margin and with ample equity, suddenly lost in 1932 all signs of ruggedness and most of the feelings of individualists. They instinctively felt their peril as a collective danger. They were willing and eager to pool resources with government help to bolster up the entire ownership idea. Owners, after being a majority throughout our history, had become almost

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overnight a pitiful minority. It was owners and businessmen who cheered to the echo, in 1933, the strict Federal business props of a National Recovery Act.

Then why did the cheering subside so rapidly after 1933? Why did the same groups of owners begin to raise once more the hue and cry of ruggedness and individuality?

The answer to those questions can also be read—at least, in large part—from the creditor dominance story of the ensuing years. How did owners stand, as against creditors, by 1936?

From preliminary estimates, based on Conference Board work of 1934 and 1935, national wealth by 1936 probably stood at \$305 billion, thanks to greater activity and mildly rising prices since 1932. In contrast, the debt total, even including the increased Federal debt, failed to rise correspondingly. Private long-term debt stood at about \$77 billion. State and local debt amounted to about \$19.6 billion. Federal debt had risen to \$33.0 billion,¹ but bank loan debt had declined to only \$10.5 billion. The grand total of debt was approximately \$140.1 billion—a rise of about 2 per cent since 1932. (See Chart 16, page 185.)

Thus, by 1936, debt claims had sunk back to only 45.9 per cent of national wealth. The equity of owners had again risen to a “majority” position at 54.1 per cent of total wealth. Is it surprising that,

¹ This does not include the indirect “guaranteed” obligations of the government, such as the Home Owners Loan Corporation bonds, which are already included in the Conference Board estimate of private long-term debt.

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with this reversal in their favor, owners should have gathered courage again, recovered some of their ruggedness, and begun to seek emancipation from the very champion—central government—they had sought out in 1932?

In other words, the “emergency” of 1932 and 1933 was more than a mere decline in earnings and prices and employment. It was more than a mere clogging of trade channels, domestic and international, far more than just an ordinary “depression” among many successive waves of prosperity. It was more than all these things, not simply in extent and severity, but in a far deeper sense. It was a struggle of gigantic proportions between the two conflicting principles of ownership capitalism and creditorship capitalism.

It was a rather ghastly exhibition of what can happen to a *divided house* when the group that has hitherto dominated—in this case, owner capitalists—suddenly finds itself a weak minority, dominated in turn by the forces it had once used for its own profit and advantage.

In similar terms, the emergence from 1933 to 1936 was more than an ordinary “recovery.” It was a violent reassertion of ownership supremacy—not a trite struggle between the “haves” and the “have-nots,” but a struggle between those whose stake was thrown with owners, and the productive capitalism of ownership, against those whose stakes were with creditorship.

In this light, many of the extraordinary cross-currents of opinion during the “recovery” years

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become more understandable—the grouping of labor and small owners and businessmen on the production side, and of finance capitalists on the other. This was no “class war” in the ordinary understanding of those words. It was an instinctive massing of great groups according to their function in our economic divided house. It was a portent, perhaps, of future economic earthquakes.

But it was not a struggle between the “many” and the “few” in the hackneyed meaning of the demagogues. It was a struggle of owners who had borrowed disastrously, against lenders who had lent unwisely—with thousands of individuals in the impossible position of being both owners and lenders, and throwing their lot with one side or the other according to the side in which their stakes were heaviest.

As long as we continue a system—by whatever name we call it—in which one side is encouraged to debauch itself by going into debt and risking its ownership birthright, and in which the other side, even with the most benevolent intentions in the world, finds itself attaining a dominance that threatens the very existence of ownership; as long as we maintain this dual system and this economic divided house we shall certainly find the spectacle of 1932 and 1933 repeated over and over again, until the system can no longer stand it and disintegrates into something else.

Owners’ becoming overextended is one of the real and deepest meanings of “inflation.” Compared with the growth of creditor dominance and the de-

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cline of ownership equity in the past two decades, all forms of "absolute" inflation are mere surface ripples. It is in this sense that we reached what was probably the greatest inflation in our history in 1932. And it is in this same major sense that *from 1932 to early 1937 we were in the course of a deflation that perhaps rescued the whole principle of private ownership from imminent collapse.*

But the basic problem of modern "dual" capitalism has not been solved. It cannot, I believe, be solved until we find some way (other than mere governmental policing), of protecting ownership against its own greedy borrowing, and of financing the use of privately owned means of production by some other method than the creation of more and more debt.

Our problem is not one of steering some precarious "middle course" between capitalism and communism. That would be economic tight-rope walking with a vengeance! What we must do is find a way in which the basis of ownership capitalism can be strengthened, brought to a far higher sense of integrity, and held to the full exercise of the moral responsibility that is an integral part of the very idea of ownership.

The solution of this problem is in every sense a summons to the true conservative spirit of the Western world—to those who wish actually *to conserve* the whole principle of private ownership and individual responsibility.

This may involve far-reaching changes. It will almost certainly involve the substitution, on a wider

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and wider scale over the years, of partnership or "equity" financing for the creditor financing on which we have depended so heavily in the past. It may even involve a gradual change in banking from a strictly creditor operation to one in which banks become equity partners in the operations they finance.

Some of these possibilities are discussed in Chapter XIV, and the more technical aspects of them in Appendix A. But whether future changes come along the lines discussed or in some other way similar to them, the conservation of the ownership principle has clearly become the major economic problem of modern life.

Two decades ago, in 1914, it was little more than an academic problem. Owners then ruled. But with the steady and accelerating rise of creditor dominance from 1922 to the most recent climax of 1932, the whole scope of the problem changed. It became the most challenging reality of the century. It grew, almost unperceived. Even today its nature is hardly understood. Most of us are still thinking in terms of the actual ownership security of 1914.

The facts are almost too startling to comprehend at a glance. But if, since 1933, ownership has been given one more chance to survive, it must seize on that chance to build a new kind of economic house, *no longer divided*, no longer shifting dominance from one side to the other, but so constructed as to conserve every fine meaning that can spring from the words "to own"!

CHAPTER XII

Decades of Interest Payments



WITH debt goes interest on the debt. If we can compare the face value of debt claims with the value of our tangible wealth—as we have done in the last chapter, since 1914—it would seem at first glance that we ought to be able to compare interest charges with national income in almost parallel terms. Unfortunately, the matter is not so simple as that. Debt claims themselves are not a part of the national wealth; but interest payments are themselves a part of the national income. That is where the difference lies.

To be sure, much of our national wealth has been created by the use of borrowed money. In that sense there is a close relationship between the process of going into debt and the process of creating new tangible wealth. But when we take stock at any given moment of wealth, and of debt claims against that wealth, the two items can be separated. They are distinct “balance sheet” items.

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But in estimating national income it is almost impossible to separate interest payments received from other sources of income. Even wages paid to factory or railroad workers may be in part the result of interest payments. For example, one railroad has bond investments in some other railroads. Part of its income, out of which it pays wages to train workers and office forces, comes from the interest received on those bonds. In other words, income merges into one large stream and cannot, for practical purposes, be separated at any given time into its many complicated sources.

What we can do is to estimate with fair accuracy the total of interest actually paid in any one year, *and compare it* with the total national income received from all sources in the same year.

We cannot make the bald statement that "out of each dollar of production income this year so much had to go to interest payments." But we can say, "for each dollar of total income this year so much was paid in interest." In other words, we can compare the two items, but we cannot charge one against the other as we could in the case of debt claims and national wealth.

In broad perspective, this distinction is not highly important. For we know thoroughly well that money paid in interest is added to the cost of all goods and services on which we spend our income. If our income is swelled by interest received, so is the total of our expenditures, whether in taxes or in increased cost of goods and services purchased.

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In this sense we are "inflated" when interest payments are high compared with national income, and we are "deflated" when the interest payments are relatively low. We may receive interest with one hand and spend it with the other, but in so doing we are swelling or inflating both receipts and expenditures by sums that do not represent the barter and exchange of real goods and services.

Interest is an inflationary *surcharge* on expenditures, and an inflationary *surcredit* to income received. It may swell or inflate both sides of the picture by an equal amount, but in no case does it increase the total physical volume of trade transacted as between all the people of the country. We might suppose that the clerical work of keeping track of interest—salaries paid to bank clerks and others—would add to total services rendered; but, since the interest payments must be added to the cost of all other goods bought and sold, there is no net gain to the community. The added bank clerk income is merely an offset to the added cost of all goods produced and exchanged.

With this point clearly in mind, what is the story of interest payments compared with national income for the same period over which we have just traced the growth of creditor dominance—that is, from 1914 to 1936? (See Chart 15, page 182.)

In 1914 the national income was about \$31.6 billion and interest payments on the forms of debt included in the previous chapter amounted roughly to \$2.43 billion. How do we arrive at these figures?

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There are many and varying estimates of national income. The one I have selected for present comparisons is that of the National Industrial Conference Board. The Conference Board's methods of computing income seem to have varied somewhat as between the period prior to 1929 and the period since, but by a simple statistical adjustment the two series of figures can be linked together sufficiently well to make a general comparison possible. Furthermore, I have had to use my own estimates for 1935 and 1936, based on Department of Commerce figures and related confirming data. In any event, the very best figures obtainable are simply estimates, whether for earlier or for later years. But in the broad sense of showing a *trend*, they are probably quite accurate enough for our present purposes.

In estimating interest payments I have used the Conference Board figures on interest actually paid on private long-term debt, and added to that the following items: (a) approximate interest paid on the Federal debt; (b) interest at 4.5 per cent on state and local debt estimates from 1914 to 1931, and thereafter at a slightly declining rate ending with 4.15 per cent in 1936, thus allowing for new debt issues at low rates since 1931 and for refunding of old debt at lower interest rates; (c) interest on total bank loan debt at the average rate charged customers by leading banks of the country.

As in the case of the debt claim estimates, I have made no effort to include the great volume of unrecorded private loans and installment debt. Those

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must be added mentally to gain the full perspective, but any concrete estimates would be far too wild to be of any practical use.

Thus, in 1914 we have the Conference Board estimate of \$1.7 billion for interest paid on private long-term debt, plus a figure of \$22.8 million paid on Federal debt and \$202.5 million at 4.5 per cent on an estimated state and local debt of \$4.5 billion. We have also a total of bank loans (exclusive of mortgages) of \$11.120 billion on which we can estimate interest at 4.5 per cent, that being the average estimated rate charged customers in 1914 by leading banks. This particular interest item would thus amount to \$500 million. By adding these various estimates, we get our total interest payments of \$2.430 billion for 1914.

Thus, in 1914, with income at \$31.6 billion, for every hundred dollars of income received, \$7.69 was paid in interest—that is, interest payments were 7.7 per cent of national income. In that year, it will be recalled, creditor claims amounted to 27.6 per cent of our national wealth.

What was the change by 1920? In that year, creditor claims had fallen to 22 per cent of national wealth. We find that with a national income for 1920 of \$73.4 billion, interest payments had risen to \$5.57 billion—or some 7.59 per cent of income. In spite of a falling proportion of debt claims to wealth, and in spite of a large rise in income, interest payments still constituted a large proportion of income—a payment of \$7.59 on every \$100 of income received. What was the reason for the failure

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of interest payments to drop proportionately as fast as debt claims?

The division of interest payments into separate items shows that interest on the Federal debt had risen from \$22.8 *million* to \$1.02 *billion*; that interest on private long-term debt had risen from \$1.7 billion to \$2.6 billion; that interest on state and local debt had risen from \$203 million to \$329 million, and that bank loans had not only more than doubled in total, but also the rate of interest on them had risen from 4.5 per cent to an average of 6.62 per cent, thus increasing the total bank loan interest from \$500 *million* to \$1.625 *billion*.

This latter figure is an excellent illustration of the important part played in our national scheme by the fluctuation of the bank loan interest rate. (See Chapter VI for a full discussion of this factor.) The principal amount of bank loan debt rose only 121 per cent in the period—from \$11.12 billion to \$24.55 billion. But with the rising bank loan interest rate, the actual interest payments on the debt rose 225 per cent!

Too many people not only fail to add up various debt totals—forgetting that all of us have a share in the total aggregate debt—but also fail to consider the effect of rising and lowering bank rates on the total of interest payments. Bank loans (always excluding mortgages, which are already included in the Conference Board estimates of private long-term debt) constitute at all times a formidable proportion of both debt totals and interest totals. Thus, as we shall see later, a rise in Federal debt may, at

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certain times, be wholly offset by a decline in bank loans, and the decline in bank loan interest may still further offset the increasing interest on Federal debt. It is the combined picture that tells the story of growing nation-wide inflation or deflation in debt and interest.

Reverting again to the progress of interest as compared with income, we find that by 1922 (when debt claims had risen to 34.2 per cent of national wealth) interest payments had increased to 8.9 per cent of national income. The income figure for that year was \$61 billion, and the interest payments were almost as high as in 1920 and stood at \$5.43 billion. Bank loan interest and Federal debt interest had both declined somewhat, but interest on private long-term debt and interest on state and local debt had both risen. For every \$100 of 1922 income, payments of \$8.90 were made in interest.

By 1929 (when debt claims had risen to 42.1 per cent of national wealth) the proportionate interest payments had also risen further. In this year of supposedly culminating prosperity, no less than \$9.71 was paid out in interest for every \$100 of income received. Private long-term debt interest had continued to expand, and so had interest on the growing total of state and local debt. Moreover, the bank loan total had continued to rise and the average rate of interest at 6.04 per cent was again high. The total of interest payments amounted to \$7.77 billion out of a national income of \$80 billion. Thus the "progress" over a sixteen-year period can be stated as follows (in billions of dollars):

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	1914	1929
Aggregate debt.....	\$49.90	\$143.00
Aggregate interest.....	2.43	7.77
National income.....	31.60	80.00
Dollars of interest to dollars of national income...	7.69	9.71

But just as in the case of growing creditor dominance in debt claims compared with national wealth, we were not to reach the climax of this form of inflation (or overextension) until the fatal year of 1932. In that year, with a national income cut drastically to only \$46.9 billion, and with total interest payments only slightly cut to \$6.91 billion, we were paying not a cent less than \$14.73 in interest for every \$100 of national income!

The interest payments for this historic year tabulate as follows (in billions of dollars):

On \$81.8 billion of private long-term debt....	\$4.600
On 16.5 billion of bank loans at 5.12%.....	0.845
On 19.1 billion of Federal debt.....	0.599
On 19.6 billion of state and local debt at 4.4%.	0.862
Grand total.....	\$6.906

Thus, in comparisons of both debt claims with wealth, and interest payments with national income, the year 1932 was by all odds our most overextended or inflated year in the entire period from 1914 onward!

Not only was there a principal debt claim against 59.5 per cent of our national wealth, but interest payments amounted to very nearly 15 per cent of our national income. The very existence of con-

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tinuous private ownership was in peril from the acute creditor dominance, and also from the pressure of interest payments extending to every stratum of our society.

We are all too accustomed to think of 1932 as a year of maximum "deflation." But in all common sense, and if there is any meaning at all left to the word "overextended," then we must think of it as a year of acute "inflation"—a year of maximum strain on the credit structure (i.e., debt structure), on the integrity of ownership, and on the proportion of income not represented by interest received or paid out.

Real *deflation* is not accomplished until, after a period of boom, debts are paid off and interest reduced in reasonable proportion to reduction in ownership values and income from production and exchange of goods. But in 1932 debts had risen in proportion to ownership values, and interest had risen in proportion to income from production and trade. By no manner of common sense, then, can we call 1932 in the broad aspect anything but a year of extreme inflation.

What happened, then, during the next four years? From the press, from bankers and businessmen and economists and from a thousand soap boxes, the years of 1933 to 1936 have been proclaimed years of growing inflation. We know from earlier discussions in this book that they have been years of bond price inflation, of rising equity values and of mildly rising general price level. But what have they been in the broader sense we are now discussing?

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We already know that they have been years of declining creditor dominance—that debt claims, instead of being 59.5 per cent of our national wealth, had dropped by 1936 to only 45.9 per cent of wealth. But what of interest charges compared to national income?

A figure of \$60 billion seems eminently reasonable for national income in 1936—an increase of 17.9 per cent in two years over the last official estimate of the Conference Board for 1934. Against this we must set a similar estimate of interest payments as follows (in billions of dollars):

On \$77.00 billion of private long-term debt	\$4.100
On 10.51 billion of bank loans at 3.45 %.....	.363
On 33.00 billion of Federal debt.....	.800
On 19.60 billion of state and local debt at 4.15 %	.813

Grand total..... \$6.076

Thus, in spite of the enormous increase in Federal debt, we find that the progressively lower interest rate on this debt, combined with a lower total of and lower interest rate on bank loans, and minor declines in private long-term debt and interest, the total interest payments for 1936 *were smaller by several hundred millions than the total for 1932!*

In other words, as against \$14.73 of interest for every \$100 of income in 1932, the comparison for 1936 shows only \$10.13 interest for every \$100 of income—a lower proportion than in any year since 1929. To make a complete perspective possible, the year-to-year changes in this proportion are shown on Chart 15 on page 182.

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The plain facts are that in the aggregate we were in a period of genuine *deflation* from 1932 to 1936—of declining debt claims compared with wealth, and of declining interest charges compared with national income.

To be sure, the Federal debt, *taken by itself*, was being constantly inflated or extended, and with it taxation. But taxation is only one form in which, as a nation, we help to pay interest charges. The invisible interest charge which we pay with the cost of goods and services we buy is of precisely equal importance to us in the full economic sense—less painful, of course, and more sweetly narcotic, but nonetheless real.

Had we not had a stupendous decline in bank loans as an offset to rising Federal debt, or had we had a simultaneous rise in both bank loans and Federal debt as we did in the World War period, we should undoubtedly have had rising instead of falling interest rates and a real trend of continued inflation.

But bank loans (excluding mortgages) did fall (a decline of some \$18.2 billion between 1930 and 1936) and more than offset the entire rise in direct deficit-financing Federal debt. Private long-term debt and interest charges declined too. With a lower total of interest charges in 1936 than in 1932, we can say that the entire gain in national income in those four years represented a *net gain* compared with interest payments and thus a very real, tangible, and practical process of slow relative deflation.

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It is well within the power of the layman to keep track for himself of what these comparisons will show from year to year in the future. The Conference Board figures on wealth, private long-term debt, national income, and related items are released at regular intervals for publication in the newspapers. The Comptroller's reports on all banks of the country can always, with a little effort, be obtained from the Treasury Department, or similar data can be found in the Federal Reserve Bulletins.

The major items to watch for are (a) increases in total bank loans and (b) increases or decreases in Federal debt, and the approximate rates of interest applying to both classes of debt. These are the items that are likely to change most rapidly and, under many circumstances, to offset each other to important degrees.

The very gains in business activity, for instance, which would tend to increase bank loan debt would also tend to reduce the emergency and relief expenditures of the Federal government and permit a reduction in the government debt. Thus a rise of \$2 billion in bank debt might conceivably be offset by a reduction of \$2 billion in Federal debt, and so prevent an inflationary trend in the comparison of debt with wealth. On the other hand, if both Federal debt and bank debt should rise sharply together, their combined rise might be enough to offset any increased appraisal value of national wealth. So, too, a sharp rise in interest rates, both long and short term, applied to a mounting total of combined debt might show a gain in total interest charges

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compared with national income, and thus renew this particular inflationary trend of the twenties.

The other items—private long-term debt and state and local debt—are, of course, equally important in arriving at final totals, but they change much less abruptly than do bank debt and Federal debt. It is quite enough for all practical purposes to note the official estimates of private and “municipal” debt once a year.

The main point is always served if we keep clearly in mind the principle involved: namely, that we cannot judge inflationary or deflationary trends in our national affairs *from single forms of debt* but must always *add up totals* for both principal and interest before we can make significant comparisons with national wealth or national income.

This ought to be obvious, but much of the careless discussion of the last few years proves that it is not; we think of interest charges chiefly in terms of visible taxation, we think of national indebtedness chiefly in terms of official Federal debt, and we look at both debt figures and interest figures in a vacuum and seldom compare them with either wealth or income.

The practical results of our limited and one-sided thinking have been to lead us so far from common-sense conclusions that we have gone into panics over inflation while we were actually deflating, talked growing prosperity while we were actually inflating, have sought to borrow ourselves out of “deflation” when we were actually wildly inflated already, and have made our commitments generally,

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whether for business or investment, on totally wrong assumptions!

If we are ever to reach a sensible control of our business and financial operations, and above all, if we are ever to make a frontal attack on the problem of why we should continue to suffer at all from alternating *and increasing* booms and depressions, hope and despair, we must learn how to think in aggregate terms and in terms of the relation of each major factor of our economic life to some other closely connected factor.

"Other things" never do "remain equal." Wealth and debt, income and interest, under our general debt system are bound to each other inexorably. The moment we try to separate them we are getting away from practical realities and entering a one-sided dream world.

It is one of the great paradoxes of recent times that so many of our allegedly practical leaders in finance and business should have been the very ones to shun realities and base their decisions on fragmentary views of only half the essential facts.

CHAPTER XIII

The Standard of Living



WHEN all figures are added, subtracted, or divided, when we have reached our rough conclusions concerning the inflating of bond prices, or stock prices, or the general price level, or the inflating of debt against wealth, or of interest charges against income, the one final form of *general inflation* upon which we center our hopes or fears is that combination of all forces which *raises or lowers our standard of living*.

We could be content with any form of money, we could look complacently at any price rise or at any reduction in dollar income if only we felt certain that it would not affect the ultimate material goal of all our work—a steady to rising standard of living values.

There may often be important spiritual values to be drawn from material adversity. Moreover, there has been more than one St. Francis of Assisi to find enormous consolation in voluntary poverty. Whole nations and civilizations have grown soft

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and corrupt in long-continued prosperity. But all this does not alter the intensity of the human quest for at least a meager stability in the material standards of daily life, nor the paramount dread of any gigantic events which imperil that stability or the hope of gradual improvement.

The ultimate inflation, then, from the economic standard is any combination of forces which drives *down* the standard of living by driving *upward* the pressure against that standard.

Perhaps we can best illustrate how such forces work by pointing out that, in spite of family dollar income in the United States being 16 per cent greater in 1932 than in 1914, the average standard of living was about 8 per cent lower; or by noting that the family standard of living in 1928 was actually a bit lower than in 1917.

I use the word "average" in this connection with great reluctance because it is so grossly misleading. Those who like to think of themselves as being somewhere near the average would be indignant at the very notion that there was no improvement in their living standard in 1928 over 1917—and they would be quite right. Whole great classes of a country may show an improvement while the cold-blooded average shows a decline. Those who were employed at all in 1932 were probably better off than most of those employed in 1914. Yet, if we are to consider the country as a whole, we simply must offset the misery of the 1932 unemployed against the improved state of the employed. The average does tell its own story, and a most important

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one, even if it seems to apply to few individual cases.

One way of arriving at this story of the average standard of living is to compare family income in dollars with the cost of living—that is, dollars received with what those dollars will buy in a properly weighted family budget. To do this correctly, several simple operations are necessary.

First—as to family income. A reasonable way of estimating this figure is to take the National Industrial Conference Board appraisal of national income in any one year, and divide it by the population of the United States in that year. The result gives us income per person—or per capita income. Then, if we want to base our measurements on a family of four, all we have to do is to multiply the per capita income by four.

Thus, in 1914, the national income was \$31.6 billion and the population was 97.9 million. Dividing one by the other gives us \$323 as the per capita income for that year, and four times that, or \$1,292, as the average income for a family of four persons.

Second—as to cost of living on a family budget basis. Once more the Conference Board studies are highly valuable. The budget costs of the average family have been worked out in great detail, giving due weight or importance to rent, clothing, heat and light, incidentals such as carfare, and food costs. All these vary slightly as between sections of the country, but the final figure is a reasonably fair average showing how changes in price of this or that item affect the total cost of living on a given budget or standard of expenses.

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The Conference Board makes an index of this cost of living, using the prices of 1923 as the measuring standard or "100" point. As I explained in the first part of this book, any year can be used as a "100 point" or base year, without in the least altering the percentage changes from any one year to another. Since so many of our comparisons in the last two chapters have been with 1914, I have taken the Conference Board index of living costs and converted it into an index in which 1914 (instead of 1923) stands as 100. Except for this particular purpose, the layman can always use the Conference Board's index just as it stands to detect the change from year to year or month to month in cost of living. The Conference Board's reports on this index are published monthly in leading newspapers.

Third—as to standard of living. It is obvious that if the cost of living rises 20 per cent while family income is rising only 10 per cent, the standard of living for that family (including ability to save money) must come down. The way this is handled in statistics is simply to divide the dollar income per family in any one year by the index of living costs for that year. In other words, if in a given year family income is \$2,000 and the index of living stands at 100 per cent, then dividing \$2,000 by 100 per cent still leaves us with \$2,000. If, as in the present case, the index figure of 100 represents living costs in the year 1914, then we can say that family income now stands at \$2,000 *in terms of the buying power of 1914 dollars*.

But the next year—let us say—family income rises to \$2,100 and the 1914 index of living costs

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rises to 120. Dividing \$2,100 by 120 per cent gives us a figure of \$1,750. We can then say that in terms of what 1914 dollars would buy, the family income has been *reduced* from \$2,000 to \$1,750.

To illustrate further by actual figures, we find that the average income for a family of four in 1914 was \$1,292, and that figure divided by the 1914 index of 100 for cost of living gives us, of course, just \$1,292 as our standard for future comparison. By 1916 average family income had risen to \$1,736, but the index of living costs had also risen to 106.6. In this case the actual 1916 income, *in terms of 1914 dollar buying power*, had risen only to \$1,591—or the result of dividing \$1,696 by 106.6 per cent.

Using this method to arrive at *equivalent income figures* for the decades since 1914, what do we find?

We find, first of all, that the highest figure reached in the period for family income (in terms always of what 1914 dollars would buy in a family budget) was in 1916. In that year family income reached \$1,629 (in 1914 dollars), showing an increase in standard of living over 1914 of 26.1 per cent.

The nearest approach to this figure was in 1928, with income at \$1,617, or 25.1 per cent above 1914. Only two other years even faintly approached 1928 and 1916 for high living standard as compared with 1914. Those two years were 1929, with standard 24.5 per cent above 1914, and 1917, which was very close to 1916. The highest gains over 1914 in any other years were 1925 and 1918, which stood at 21.3 and 20.2 per cent above 1914, respectively.

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In all the twenty-three years of this period, from 1914 to 1936 inclusive, the only years that fell below the 1914 standard were 1921 (down 10.6 per cent) and the years of 1932, 1933, 1934, and 1935, with declines of 8.3, 10, 3.6, and 2 per cent respectively, below 1914.

In brief, these were the only years in which "absolute" inflationary forces, driving against the buying power of family income, produced a real inflation of living costs compared with family income. Our greatest single *year* of inflation in these terms was 1921. But our greatest *protracted period* of this basic kind of inflation was in the successive years of 1932, 1933, 1934, and 1935, with 1933 as the climax, and a distinct lessening of the pressure by 1934. By 1936 family income in 1914 buying power again stood 2.8 per cent above 1914.

This distinction between a single year and a protracted period is of enormous importance if we are trying to estimate the social and economic effects of this kind of inflation. Savings and other resources can be mobilized to meet a short emergency of reduced family buying power. But long successive years, at a rapid rate of inflation (reduced buying power), not only exhaust savings but accelerate unemployment and the entire downward spiral of reduced living standards.

For example, if we take the four-year average following the crest of the 1919 boom and a similar four-year average following 1929, we find that family buying power was some 3 per cent higher in the earlier period than in the later one. Not only this,

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but the enforced *change* in the standard of living was less after the 1919 boom.

Average income for the three years preceding the 1920 collapse (in 1914 dollars) was \$1,565, and dropped to an average for the next four years of \$1,382—a decline from an “accustomed” standard of about 11.6 per cent. Against this, the decline of the thirties from the three-year average of 1927–1929 was over 18 per cent! It is these *protracted enforced changes* from a living standard to which a people has become accustomed that raise threats to the entire stability of our society and force readjustments of acutely painful and often tragic character.

Thus, in every reasonable sense, the inflation of the thirties was far worse than the inflation of the twenties. It may be merely coincidence that the inflation of debt to wealth and of interest payments to national income was also much worse in the thirties—but some sort of connection between these circumstances seems almost inescapable.

To be sure, the standard of living (see Chart 15 on page 182) showed a steady increase (i.e., relative cost of living *decreased*) in the same period (from 1922 to 1929) during which debt was gaining steadily on wealth and interest payments on income. But was this anything more than the prelude to a climax of forces that inevitably exaggerated the impact of the ultimate inflation of the thirties? Ownership was losing ground. Income was becoming more and more the servant of interest charges. When ownership values fell and debts remained fixed, when

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income fell and interest payments remained high, were not these the very phenomena to throw us into a worse turmoil of basic inflation than we had ever known in the century, if not in our entire history?

At all events, we have the plain facts that from 1929 to 1933 the family standard of living fell (in 1914 dollars) from \$1,610 to \$1,162—a drop of more than 27 per cent; whereas from 1933 to 1936, the standard of living rose once more from \$1,162 to \$1,330—a rise of more than 14 per cent. Moreover, the rise coincided with a period in which wealth again gained rapidly on debt and income on interest charges.

If it is possible—which I believe it is—to draw sensible conclusions from the chain of events described in this and the two previous chapters, we might well say that periods of sound improvement in living standard should be accompanied by no rise in the ratio of debt to wealth, and by no rise in the ratio of interest payments to income. If we do not have these conditions—if debt gains on wealth and interest on income—then in the very midst of an apparently improving living standard we are laying the groundwork for a real ultimate inflation that will destroy all the benefit gained.

The living standard of the twenties improved temporarily against a rising tide of debt and interest inflation, and then collapsed with protracted tragedy. In contrast, the rising living standard of the war period saw for several years a decline in debt and

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interest inflation. A collapse ensued. But it was sharp and short. By 1922 we already showed a net gain over 1914. There was human mercy in the brevity of the disaster. Possibly in this contrast we can see something of what our future efforts should seek to attain.

CHAPTER XIV

Owners in Bondage



THE inescapable conclusion of any factual study of the major kinds of inflation is that debt, in its many forms, moves restlessly and relentlessly beneath all of them.

This conclusion is equally forced upon us whether we are discussing the "absolute" types of inflation—the *price raising* of bonds, equities, or goods and services, or the raising of the short-term interest rate—or the more fundamental "relative" types of inflation in terms of debt to wealth, interest charges to income, or cost of living to income. In the four absolute types and in the three relative types—in seven major types in all—we find that changes in some part of the debt structure are chiefly responsible for the intensity, height, and depth of the great waves that carry our whole civilization from boom to panic and back to boom again.

We find an inflation of bond prices when debt in the unique form of money piles up at a faster

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rate than the outstanding credit (loans and investments) of the commercial banking system.

We find an inflation of the short-term interest rate when certain forms of bank credit rise faster than debt in the form of money.

We find an inflation of equity values when the velocity of money is rising as compared with the volume of commercial bank loan debt, particularly when the volume of money is also rising as compared with certain forms of banking debt and with primary metallic money.

We find an inflation of the general price level when the velocity of money debt rises as compared with the physical volume of goods and services being traded.

In all four cases of specific price raising we find debt relationships paramount. The processes connected with ownership of goods—production and consumption—are constantly being twisted and distorted or thrown out of balance by the interaction upon them of various forms of debt.

But we have found the same phenomenon appearing when we analyze the purely "relative" forms of inflation.

We have found the whole essence and structure of ownership capitalism imperiled by an undue growth of debt claims against ownership—and that such a crisis coincides with those periods of highest stress when the very foundations of the social order quake.

At similar stages we have found the undue growth of interest charges compared with income expressing another form of social stress and inflation.

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We have found that when the earning power of ownership rises, creating greater income, the beneficial effect can be entirely wiped out by the effects of debt upon the price level and the cost of living.

Thus, no matter where we turn in our analysis of various types of inflation we find the size and proportion of debt controlling the course of events, determining whether ownership shall be secure or not, whether it shall or shall not yield proper living values, whether it shall be what it is supposed to be, the "spine" of the capitalist system, or little more than the fodder to satisfy the appetite of debt.

Nor, strangely enough, do we find owners, as a class, the unwilling victims of debt. Quite to the contrary, we find owners for long periods of years eager to get into debt, eager to use "other people's money" for their own greater profit, zealous to borrow money at 4 per cent on which they can earn (for a time!) 6 per cent or higher.

In short, we find no "case against creditors," as a class, that is not completely counterbalanced by an equally strong case against the greed of owners.

But what we do find—or what we *would* find if only we could clear our minds of centuries of debt-ridden thinking—is a clear case against the *simultaneous existence within one economic system* of the two antagonistic principles of "ownership capitalism" and "creditorship capitalism."

The two principles merely succeed in making modern capitalism *an inherently divided house!*

They merely succeed in creating a sort of "economic neurosis"—a pulling apart of interests—an economic state of mind analogous to that of the

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manic depressive who soars one instant to the heights of optimism and sinks the next instant to despair.

It is possible to say, with more than figurative truth, therefore, that our appalling cycles of boom and depression, with all they entail of false hopes and realistic agony, *are neurotic symptoms on a huge mass scale*, with the perpetual conflict of owners and creditors as the root of the neurosis.

I do not wish to be an alarmist. The business of scaring up ghosts is too easy to start and far too hard to stop. But I do feel that we have reached a time when only clarity of analysis and realistic acceptance of facts can hope to conserve the essential values derived from the capitalism of private ownership of productive property.

The attempt to maintain *an inherently divided house* is a far subtler enemy to the future of private ownership than any of the open preachments of state capitalism or communism. If we do not understand this, clearly and forthrightly, then we simply do not understand ourselves or the inescapable antagonism of the processes by which we are trying to continue our "system." In that case, the real danger is from within—and not from outside!

The real question facing us, as true conservatives, is this: do we or do we not *wish to conserve* the basic idea of private ownership of goods and of the means of producing goods?

If we do, then our task is very different from the task of believers in ownership prior to the World War. If owners held an equity in our national wealth

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of about 72 per cent in 1914, their problem was vastly different in degree and urgency from the owners of 1932, who held less than a 41 per cent equity in national wealth, and even from the somewhat strengthened owners of 1936 who held a 54.1 per cent equity. To put it in the plainest language of business, owners were "well heeled" in 1914 and entitled to some feeling of security, whereas in 1932 (and even in 1936) owners were far out on a limb with a gale blowing and hurricane signals set.

To understand this fully, all we have to do is set up a few simple illustrations of the so-called "leverage" of debt upon the position of owners. Let us take first a case that will illustrate in round figures the position of 1914:

The appraisal of tangible wealth at current prices was.....	\$180 billion
The dollar value of major debts was.....	50
<hr/>	
Leaving an equity to owners of.....	\$130
or, in percentage of wealth.....	72 per cent

Now, starting from this point, what would happen to owners if general prices dropped 30 per cent while debts remained fixed?

The new value of national wealth would drop to	\$126 billion
The dollar value of debts would remain at	50
<hr/>	
Still leaving owners a substantial equity of \$	76
or, in percentage of wealth, over.....	60 per cent

Thus the inherent strength of ownership was relatively great in 1914, making it possible to go through a drastic price drop without putting creditor claims

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into a position of majority dominance. But how is this inherent strength of owners altered when their position, at the start, is only that of a 54.1 per cent equity, as in 1936?

The current appraisal of wealth is.....	\$305 billion
The dollar value of debts is.....	140

Leaving an equity to owners of.....	\$165
or, in percentage of wealth.....	54.1 per cent

With this as the starting point, what would happen to owners if general prices again dropped 30 per cent while debts remained fixed?

The new value of national wealth would be	\$214 billion
The dollar value of debts would remain at	140

Leaving owners an equity of only.....	\$ 74
or, in percentage of wealth, less than..	35 per cent

The brutal fact emerging from this comparison is that, in spite of all the increase in wealth since 1914, a 30 per cent price drop from the 1936 position would leave owners with *\$2 billion less wealth than they would have had after a similar price drop from their 1914 position!*

In these twenty-two years wealth increased about 69 per cent. In the same period, owing to rising debt proportions, owners' actual dollar equity in the rising wealth increased only 27 per cent!

In the first instance, an unforeseen price drop would have left them with a dollar equity of \$76 billion. In the second case, a similar price drop would have left them with only \$74 billion!

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This is the concrete meaning of the leverage of debt against ownership security. It is the hard and rigorous statement, in terms any businessman will recognize, of just why and to what extent the ownership problem of today *is different from that of earlier decades*, and of why the complacent statement that "we have always come out of similar troubles before" is nothing but a fatuous absurdity.

In the meantime, practically all the current business discussions, most of the economic writings, and all the world political programs are directed either toward averting communism or toward some vague forms of "controlling credit"—that is, in more honest language, toward controlling debt. Nowhere, to the best of my knowledge, do we find the fundamental question being asked of whether or not we wish to continue the debt system at all!

We must remember, of course, that financing through indebtedness has been in constantly increasing favor ever since Calvin wrote his famous defense of usury. Moreover, debt financing has been the accepted practice during the entire existence of the machine age and the growth of industrialism. The economic world, for this reason, is supposed to revolve around debt financing with that same inevitable certainty with which the sun and stars were once supposed to revolve around the earth.

It is not in the least surprising that our consciousness is debt-ridden, that our economists take debt financing wholly for granted, that the passing of ownership security in the last two decades has been almost unnoticed, that we stop short at *analyzing*

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inflations without asking *why they must continue*, and that we always fail to discuss debt realistically because we take it so solemnly as something approaching a law of nature.

Nevertheless, debt financing is *not* a law of nature; inflations (of the kind that really disrupt the social order) are *not* inevitable; ownership security is, in plain fact and figures, a thing of the past; and the time has come when we must *at least study* the phenomenon of debt in as scientific and practical a way as Galileo studied the misleading solar system of Ptolemy.

The owners of today are in heavy bondage to the debt system. Is this necessary? Is it desirable? Is there any other method by which the capitalism of private ownership can be conserved and strengthened—to the probable benefit of every social group?

We must ask these questions. We must try to answer them. And in doing so we must exert the same courage with which Galileo asked and answered questions about the sacrosanct solar system in which the world of his day believed so intently.

Obviously, a complete survey of the debt system is far beyond the scope of this book. But on behalf of the nontechnical man in finance, and by way of suggestion to perplexed students of our modern system, whether professional or amateur, a few of the leading questions and possible partial answers to them can be put down here to some effect.

First: Why is the inner conflict between ownership capitalism and creditorship capitalism “inherent” and “inescapable”?

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A backward glance at the effect of debt leverage on ownership equities provides one answer to this question. That leverage can work in two directions. In times of rising prices it can *increase* the owners' equity faster than the rate of price rise itself. The debts remain fixed while owners' values rise. It is only in times of falling prices (or of falling earnings owing to diminished activity or "velocity") that the debt leverage is against the owners' interests.

But this means that the debt system *augments the greed of owners* at one stage, largely debauching the moral integrity supposed to inhere in ownership.

In the "down" stages, the debt system then turns around *and serves to disintegrate ownership*.

But the inherent nature of the conflict does not stop here. The creditor himself suffers if prices rise. He lends \$1,000 when wheat is worth \$1 a bushel, but collects his debt when wheat is worth \$2 a bushel. He loaned the equivalent of 1,000 bushels of wheat and receives back the equivalent of only 500 bushels.

On the other hand, the creditor's greed *is stimulated by falling prices*. He lends the equivalent of 1,000 bushels and receives back the equivalent of 2,000 bushels—and this quite aside from the interest rate. Creditors and owners can never benefit at one and the same time. What helps one injures the other. That is why we must face the fact of the conflict between them (not as persons, but as economic forces) being inherent and inescapable.

Second: In spite of the inherent nature of the conflict between ownership and creditorship, is it

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not possible to continue the traditions of centuries and to balance or control the relationship between them so as to produce general stability?

This question really demands an entire book for adequate answer. But several brief comments suggest themselves at once. We face the historic fact that in recent decades creditor dominance *has* increased enormously, and is therefore vastly more difficult to control without resort to central government regulation than ever before in our history.

Strong central regulation implies at least a great lessening of individual responsibility and a large increase in *arbitrary* methods of control as distinct from natural adjustments brought about through honest competition. In the end it implies central control of functions as distinct from mere policing or regulation of individual effort.

We must admit that balancing the innate opposition of interests between owners and creditors is very much like trying to balance a man's life by administering first stimulants and then opiates. We have to assume that "a little debt" is a good thing. We also have to assume that some agency, government or private, is endowed with enough wisdom and omniscience to know just when "a little debt" turns into "too much debt"—and that, possessing such wisdom and knowledge, it will be permitted, in a political world, to exert the necessary controls and brakes. In other words, we have to assume an absolutism both in idea and practice and a complete willingness of huge owner and creditor interests to submit without struggle to controls

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that cut off impending advantages to one or the other.

In general, every effort to create a balance between owners and creditors is commendable in purpose, but it can never amount to more than the day-to-day treatment of a sickness—of an economic neurosis—based on a conflict, which should, if possible, be cured by removing the inner source of the conflict.

Our present system is a pathological case—and not a mere case of unbalanced diet.

Third: If we were to abandon the debt system, how could we finance new enterprise and stimulate further material progress?

The answer to this is simple. *We have already financed many huge new enterprises entirely without recourse to debt!*

Practically the entire aviation industry (although something new, untried, and freighted with high capital risks) was financed through common stock sales. It is superlatively worth noting that whereas our railroads, which were financed largely through bonds, went through one bankruptcy after another in early “depressions,” the aviation industry at large came through the worst depression in our history without a major receivership. *It was financed by equity partners—not by creditors!*

But the aviation industry is far from being a lone instance of progress financed without debt. The greater part of British industry has always raised money through shares—that is, by securing additional equity partners—rather than by borrowing

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from creditors. Most of our great American industries (aside from railroads and public utilities) have either financed themselves in major part or entirely by stock, or have shown the wisdom of the serpent in reducing indebtedness to bond creditors as rapidly as possible. Thousands of small businesses are financed every year either by partnership agreements or by stock issues.

In other words, ownership over the decades has already foregone in great part the added profits realized on borrowed money and has progressed amazingly on strict partnership (or equity) financing.

Thus, the question of "how to have progress without debt" largely answers itself from actual large-scale precedent. Nevertheless, in spite of all the debt-free enterprise, we cannot forget that in 1936 the owner equity in American wealth was only 54.1 per cent. Our economic system *as a whole* has put ownership in bondage, in spite of all the wisdom of great individual debt-free units!

Fourth: How far could the gradual elimination of the debt system and the substitution of an ownership financing system be carried?

The answers to this question divide themselves into several distinct fields of present debt-financing activity.

In long-term financing, outstanding bond issues over a period of years could either be paid off out of earnings reserves or could be "refunded" at maturity by the sale of additional stock. In this, as in all major economic transitions, the importance of

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the process would lie in the conscious public recognition and approval of the final objective rather than in the length of time required or in the specific adjustment of the countless details involved.

In this same field an investment medium for conservative trust funds could be provided by the present instrument of "preferred stock," giving the preferred owner a prior claim on earnings up to a certain maximum sum. The preferred owner of today sacrifices the chance for indefinitely rising profits in exchange for greater stability of modest return. But this prior interest in equities has nothing in common with the existence of a debt claim. It is simply a recognition of senior as against junior ownership rights.¹

In the field of mortgage financing of real estate and farms a "certificate of senior interest" (similar in principle to a preferred stock) could readily be substituted over the years for present bond and mortgage instruments. In practice, in recent years, mortgage lenders, such as savings banks and insurance companies, have not been resorting to "foreclosure" except in extreme cases. Instead, they have accepted "assignments of rent" which, in effect, give them the same first claim on earnings of income-producing properties that they would have from a preferred interest certificate.

In the case of owner-occupied homes, similar adjustments in practice have been made on a large scale—all of which recognize the principle that ownership should not be disturbed and uprooted,

¹ See Appendix B.

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where the default in full payment is beyond the individual power of the owner to correct.

Therefore, the transition from the debt system to an equity basis in mortgage financing would have ample precedent in the spirit of what is *already being done today*. Lending institutions would simply become joint senior owners of real estate, with prior claims on earnings and on the proceeds of sale.

The field of governmental borrowings presents fewer real difficulties than one would imagine, and for the simple reason that the essence of partnership already exists. The citizen and his government are virtually one. Certainly no group of New York City bondholders (literally holders of "corporate stock") has any practical expectation of foreclosing on the city government in case of default. Nor does a Federal treasury bondholder confidently expect to foreclose on the Speaker's desk and chair in Congress in case of a national default.

Aside from this aspect, it would still be possible (granted a sufficient public endorsement of the principle of avoiding debt) to have advances to the government *returnable in purchasing power equivalent to the amount advanced* and to have interest (or national dividends) figured on the same basis.

I am not saying that any such idea could or should be put into effect overnight. I am merely suggesting a possibility that would have in it many elements of fairness, including the impossibility of speculating in obligations representing the emergency requirements of an entire nation of one's fellow citizens and neighbors.

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Without going into the minor adjustments in other fields, such as rental agreements with optional purchase prices in place of installment debt contracts, we might pass at once, in our suggestions, to insurance companies and banks. After all, they constitute an enormous part of the aggregate debt system.

Insurance companies—and particularly the life companies—now base their rates and payments on the basis of investment in fixed debt at a minimum rate of interest compounded over the years. At first glance, they would have a hard time in meeting payments due if they had to depend on fluctuating stocks and dividends.

We must remember, however, that many preferred stocks, with no bonded debt working against them, would, under a general nondebt system, be quite as secure a source of fixed income as many bonds of today. Bonds do default—and so would some preferred stocks. But in view of the fact that a nondebt system would probably result in longer periods of stable earnings, fewer inflationary tendencies, and fewer depressed reactions, a wise investment selection of preferred stocks under such conditions would probably match anything to be obtained today from diversified bonds, both as to market price stability and as to regularity of dividend payment.

Furthermore, a growing consciousness on the part of the public that the common objective was a standard of living, rather than the maintenance of fixed dollar obligations, would probably make it

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possible to issue new forms of insurance and annuity policies, under which the beneficiary would be assured the equivalent in "standard of living returns" to the value of what he had paid in premiums.

One of the greatest causes for fearing price inflation today is the effect on annuitants and policyholders of receiving dollars worth far less in purchasing power than the dollars they have paid in premiums. It is not wholly fantastic to assume that insurance (in a strictly ownership economy) *might represent standard of living values rather than fixed dollar amounts.*

I can think of a dozen objections to this idea—but few of them are any more powerful than present-day objections to policies being paid off in depreciated dollars!

The banking field, of course, presents a far more difficult problem; so difficult, in fact, that we might well say that by far the greatest benefits to ownership would be obtained through long-term and mortgage financing changes without attempting to alter the banking system at all.

Moreover, it can be pointed out that most bank loans are made for short periods, during which major changes in price level are unlikely, and that the interest rate is flexible and can be altered drastically from month to month and year to year.

Nevertheless, since we are merely searching for ideas which others can take the time to develop, it might be worth while to point out what a nondebt or "equity" banking system would probably be like.

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In the first place, I believe that it would automatically tend to discourage the hoarding of money by making the demand deposit and checking privileges *strictly service functions*. The only banks with demand deposit liabilities would be Deposit Service banks, which would charge a fee for all services rendered, make their operating expenses and profits from those fees, and maintain at all times 100 per cent reserves against those deposits. Thus, the individual who wished to hold large amounts of cash would have to pay (in service fees) *a premium for that liquidity*.

The financing of trade and commerce would then devolve upon a second type of bank, which would be virtually a short-term equity investment trust, with short-term shareholders rather than demand depositors in the present sense. They might be called, for example, Equity Finance banks. They would "go partners" with a businessman on his current transactions, instead of making a loan to him, and would share in his profits.

To cover the risk involved, they might, for example, purchase a 50 per cent interest in a given transaction for something less than 50 per cent of the probable value of the transaction. The owner of \$100,000 worth of cotton, at current market prices, might sell a 50 per cent interest in that cotton to an Equity bank for \$45,000. If he then sold his cotton for \$120,000, the bank would get 50 per cent of that, or \$60,000. But if he sold it for only \$90,000, the bank would still get 50 per cent, or \$45,000, and thus suffer no loss. On the other hand, if cotton

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dropped 50 per cent in value in a few months (as actually happened in 1920), then the bank would get back only \$25,000—and the owner would get the same amount.

An Equity bank of this sort could afford the chance of such losses, not only because they would be matched against many large profits, *but also because the bank would have no depositors able to demand back dollar for dollar what they had deposited.*

Corporations with idle funds and other large groups would provide the equivalent of deposits in the form of three or six months' "shares," drawing out at the end of the period their prorata share of the bank's "book value" at that time. The "depositors" would thus be short-term equity investors under the bank's skilled management. The bank would put out their funds for them on a profit-sharing basis. Such a system would put a premium on the skill and business acumen of the bank's officers—but only to the same extent that any investment trust of today presupposes experienced management.

Since, under a nondebt, or equity banking system, demand deposits would become merely a service function and equity financing a use of shareholders' money, there would remain the question of providing increasing "money" to meet demands of growing population and trade.

This would have to become the function of a Reserve bank system not wholly unlike our present Federal Reserve. When shareholders' funds in the Equity banks did not provide enough money for

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current needs, the Equity banks would then resell (instead of rediscount) their shares in certain transactions to the Reserve banks, receiving new currency or Reserve bank deposit credits in exchange. The Reserve banks would be the only ones allowed to issue new currency or new deposit credits.

The somewhat technical detail of this possible system of equity banking (which, I again emphasize, is suggested merely to indicate a possibility and not as an immediate practical measure) is described more fully in Appendix A, as it is far beyond the scope of the body of this book. But there is one important point to note concerning the *automatic* working of such a system. When and if the Reserve banks realized a profit on a repurchase transaction, the amount of money involved in that profit *would automatically be retired from circulation*.

On the other hand, when the Reserve banks realized a loss, it would mean that the money represented by the loss *would automatically remain in circulation* as a more or less permanent addition to the total money supply.

An equity banking system would, thus, exactly *reverse the fatal spiral of our present debt banking*, by which the cancellation of loans in times of declining business results in *reducing* money supply when it is most needed, and by which the making of new loans in prosperous or inflationary periods *increases* the money supply *at the very time when it helps to augment the inflationary trend*.

As anyone who has read the chapters on price level inflation will readily see, this change would,

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without the intervention of arbitrary "supreme courts" of money, provide *an automatic stabilizing influence* in both rising and falling cycles of business activity and prices.

As I explained at the outset, this survey of the possibilities of setting up an economy of ownership without the conflicting element of debt suffers from far too great brevity. It is properly the subject of a long, exacting and highly technical study. But I have felt that it would not be fair to readers intimately concerned in the ever-recurrent waves of inflation and disaster not to point out the possibilities of change.

There is far too much talk today of "capitalism" versus "communism," and far too much doom predicted for capitalism, without once taking into account the fact that we do not have a capitalism of private ownership at all, but rather that "divided house" of creditors and owners which provokes the very crises the communists enjoy watching.

There is also far too much talk of looking for "middle roads" between capitalism and communism. The purpose of this chapter, then, is simply to *provoke discussion of a totally different possibility*—a genuine turning back to full-fledged ownership. The modern world has never yet tried a true equity capitalism. Perhaps it is worth trying!

Ownership involves both risks and responsibilities. Creditorship avoids every possible risk and every responsibility of equity ownership. It is an accident of bad judgment when a creditor finds himself an owner through foreclosure—when he finds himself

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paying taxes on land or factories or railroads and taking his chances with his owner-neighbors on good years and bad, bumper crops or drought, wars and rumors of wars.

An ownership, or equity, economy would have to accept all these risks willingly, and with a large increase in that very sense of "rugged individualism" which has become almost an obsolete sham under growing creditor dominance.

But, with the added risks and responsibilities, there is some hope of a compensating greater stability, a larger freedom from dire extremes, a better state of normal economic health instead of our present chronic neurosis; above all, of a growth and strengthening of that peculiar liberty *which comes only to those peoples whose interests are united.*

If we cannot live "half slave and half free," it is at least worth asking if we can hope for economic freedom when we are half owners and half creditors.

Our problems are not those of even two decades ago. It is more than an ocean of "new ideas" that has swept the world; it is an ocean of new facts and new relationships.

Threats to security that were *only potential* and still far off in the first decades of this century *have now become actual* and of this very hour. One of them is the threat to private ownership—not from communism, which is a counsel of ownership despair, but from that very finance capitalism, or creditorship, which has been grafted onto the tree of private ownership and is now beginning to choke out its life.

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By every sane and practical analysis, by every factual and hardheaded measurement, and by every common-sense observation, this debt capitalism is the very core of inflations and their agonizing after-maths. Whether or not we must continue to foster and nourish it—until it erupts in some ultimate crisis—is probably the most important single practical problem facing our social, political, and economic world today.

APPENDIX A

The Possible Technique of Non-Debt Banking



IN spite of the inherently drastic character of any proposed change to a nondebt (or equity) banking system, the disturbance involved to economic functioning might be very slight. On the other hand, equity banking, as a profession, would take on aspects at once broader and more constructive than that of any other form of economic or industrial leadership.

Bankers would become active and responsible partners in enterprise—not by accident, as today, when bad loans force them into a liquidating business—but always and with direct intention. An equity banker would have to be a keen judge of markets and marketing, of industrial processes, of agriculture and mining. The large scale “pawnbroker” aspect of much of today’s banking would disappear automatically in favor of business risks, carefully calculated and assumed, and the responsibility of stewardship.

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To compensate for this added burden, the equity banker would no longer live under the terror of "demand deposit liability." He, himself, would no longer be a debtor to his own depositors, but merely the expert manager of their pooled funds.

The technique of such an equity banking system would probably require—as hinted in brief in Chapter XIV—three major banking functions.

First

A place would be needed for deposit of money held for its convenience or liquidity value, where it could be checked out or converted into legal tender currency on demand. For convenience, we might call such depositories, "Deposit Service Banks."

These banks would have no lending or investing function. They would maintain 100 per cent reserves at all times against deposits, either in the form of currency received on deposit, or in the form of re-deposit credits with the Reserve Bank of Issue (described later).

By providing merely a convenience, storage and bookkeeping service, these Deposit Banks would have to support themselves and make their profit by charging service fees commensurate with each depositor's average balance and activity in transactions. The aggregate of these service fees would amount, in effect, to a "liquidity premium" on demand money, and thus discourage hoarding and promote active use of funds in investment, trade, or living expenses.

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Thus a quite possible scale of charges might be $\frac{1}{2}$ of 1 per cent monthly on average balances maintained (6 per cent a year) plus a flat charge of a few cents per individual deposit or check transaction. Deposit Banks would need no "surplus" and only enough subscribed or earned capital to initiate and maintain the necessary service facilities, including clearinghouse arrangements with other similar banks and with the Reserve Bank and the Equity Banks.

Second

A place would also be needed for the deposit of money to be invested under good management, but at the collective risk of all depositors, in various short-term commercial transactions or (in permitted proportions) in general equity investments.

The depositors would be, in effect, members of a syndicate or investment trust managed by the officers and directors of the bank. These banks we might call "Equity Finance Banks." Their own capital funds (unless they were mutual institutions) would be "at risk" with those of their depositors—but not as a guaranty fund against loss by depositors.

All uninvested funds would be deposited temporarily in Deposit Banks. The technique of short-term financing with depositors' funds would be to "purchase" percentage interests in specific commercial or speculative transactions. The purchase price would be such as to compensate (a) for estimated risk plus (b) a reasonable profit; in other words, all purchases would be made at a "risk-

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profit" rate, similar to "discount" in a present-day lending operation.

Thus, if the estimated value of a transaction to be completed in three months is \$100,000, and if the risk is considered small, the "risk-profit" rate might be 1 per cent per month—half of this representing risk insurance and half profit to the bank. In such a case the bank might advance or invest \$48,500 (\$50,000 less 3 per cent) in exchange for a 50 per cent interest in a \$100,000 three months' transaction.

The following tables illustrate the effect on the bank's earnings of three different assumptions: (a) that the transaction is completed at \$105,000 (a greater profit than expected), (b) at \$99,000 (a slight loss, as covered by "risk" estimates), and (c) at \$90,000 (a much heavier loss than covered by anticipated risk charges).

A.	
1. Bank has advanced.....	\$48,500
2. Transaction completed @ \$105,000	
3. Of which bank receives 50 per cent, or.....	52,500
<hr/>	
4. Giving the bank a net profit in 3 months of.....	\$ 4,000
5. Or, in annual percentage rate on \$48,500.....	32.99 %
B.	
1. Bank has advanced.....	\$48,500
2. Transaction completed @ \$99,000	
3. Of which bank receives 50 per cent, or.....	49,500
<hr/>	
4. Giving the bank a net profit in 3 months of.....	\$ 1,000
5. Or, in annual percentage rate of \$48,500.....	8.25 %
C.	
1. Bank has advanced.....	\$48,500
2. Transaction completed @ \$90,000	
3. Of which bank receives 50 per cent, or.....	45,000
<hr/>	
4. Giving the bank a net loss in 3 months of.....	\$ 3,500
5. Or, in annual percentage rate on \$48,500.....	-28.86 %

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The various effects of these same assumptions on the merchant applying for the equity financing can then be illustrated by these additional tables—in which his own “cost” is estimated at \$95,000.

A. 1. Merchant's cost.....	\$ 95,000
2. Received from bank.....	\$ 48,500
3. Received from transaction.....	105,000
	<hr/>
4. Making total receipts.....	153,500
5. Less return payment to bank.....	52,500
	<hr/>
6. And net receipts to merchant.....	101,000
	<hr/>
7. Net profit to merchant in 3 months.....	\$ 6,000
8. Or, in annual percentage rate on \$95,000.....	25.26 %
 B. 1. Merchant's cost.....	 \$ 95,000
2. Received from bank.....	\$ 48,500
3. Received from transaction.....	99,000
	<hr/>
4. Making total receipts.....	\$147,500
5. Less return payment to bank.....	49,500
	<hr/>
6. And net receipts to merchant.....	98,000
	<hr/>
7. Net profit to merchant in 3 months.....	\$ 3,000
8. Or, in annual percentage rate on \$95,000.....	12.63 %
 C. 1. Merchant's cost.....	 \$ 95,000
2. Received from bank.....	\$ 48,500
3. Received from transaction.....	90,000
	<hr/>
4. Making total receipts.....	\$138,500
5. Less return payment to bank.....	45,000
	<hr/>
6. And net receipts to merchant.....	93,500
	<hr/>
7. Net loss to merchant in 3 months.....	\$ 1,500
8. Or, in annual percentage rate on \$95,000.....	-6.32 %

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Assuming each of these three transactions to have taken place in one year, the aggregate profit and loss statements of the bank and the merchant respectively would be:

1. To bank, net dollar profit in 9 months of.....	\$1,500
2. To merchant, net dollar profit in 9 months of.....	7,500
3. Annual rate of return to bank on \$48,500.....	4.12%
4. Annual rate of return to merchant on \$95,000.....	10.53%

To show the contrast between these results of equity banking as compared with present loan and / or discount methods, we can follow through the same three transactions as *loan operations* except for the assumption that in each case the bank "discounts" the transaction at $\frac{1}{2}$ per cent per month, that is, advances (in round figures) \$49,250 and is paid back an even \$50,000.

I. Bank:

In each case advances \$49,250 and receives back

\$50,000, making a total profit in 9 months of.... \$ 2,250

Or, in annual percentage of \$49,250..... 6.09%

II. Merchant:

A. 1. Merchant's cost..... \$ 95,000

2. Received from bank..... \$ 49,250

3. Received from transaction..... 105,000

4. Total receipts..... \$154,250

5. Less return payment to bank..... 50,000

6. Net receipts to merchant..... 104,250

7. Net profit to merchant in 3 months..... \$ 9,250

8. In annual percentage of \$95,000..... 38.85%

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B. 1. Merchant's cost.....	\$ 95,000
2. Received from bank.....	\$ 49,250
3. Received from transaction.....	99,000
	<hr/>
4. Total receipts.....	\$148,250
5. Less return payment to bank.....	50,000
	<hr/>
6. Net receipts to merchant.....	98,250
	<hr/>
7. Net profit to merchant in 3 months.....	\$ 3,250
8. In annual percentage of \$95,000.....	13.68%
C. 1. Merchant's cost.....	\$ 95,000
2. Received from bank.....	\$ 49,250
3. Received from transaction.....	90,000
	<hr/>
4. Total receipts.....	\$139,250
5. Less return payment to bank....	50,000
	<hr/>
6. Net receipts to merchant.....	89,250
	<hr/>
7. Net loss to merchant in 3 months.....	\$ 5,750
8. In annual percentage of \$95,000.....	-24.21%

Thus, a comparison of results to bank and merchant respectively under the two systems (assuming each transaction taking place once in a given year) would be:

I. <i>Bank:</i>	
1. Profit in 9 months under equity banking.....	\$1,500
2. Annual rate of return on \$48,500.....	4.12%
3. Profit in 9 months under discount lending.....	2,250
4. Annual rate of return on \$49,250.....	6.09%
II. <i>Merchant:</i>	
1. Profit in 9 months under equity banking.....	\$7,500
2. Annual rate of return on \$95,000.....	10.53%
3. Profit in 9 months under discount borrowing....	6,750
4. Annual rate of return on \$95,000.....	9.47%

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Thus, in summary, on profitable transactions, under equity banking, the banker's profits would be much higher and the merchant's profits somewhat less than under the present system.

On minor loss transactions (loss as against expectancy) under equity banking the bank's profit would still be greater and the merchant's profit less than under the present system.

On major loss transactions (loss compared to merchant's actual cost) the bank would show a loss, and the merchant's loss would be much less under equity banking than under the present system.

On an *average* of profits and losses throughout the year, the bank would, in this case, come out with a smaller dollar and percentage profit under equity than under the present system, and the merchant's profit under equity would be higher. (If the bank had used good judgment in the "C" transaction by increasing the risk charge, its profits under Equity Banking need not have shown a loss as compared with the present system.)

In no case, however, under equity banking, could the merchant be entirely wiped out (as is always possible under the present system), because the bank would always be his financial partner, with merely a certain risk premium as a seniority protection.

The Equity Bank's purchases of business risks, other than specific transactions (corresponding to unsecured or "clean" credit lines under the present system) would also be made on a percentage basis. That is, advances would represent a certain "book value" at the time they were made, would be made

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at a risk-profit discount from that book value, and would be repayable in a prorata book value at a later date. In effect, such open advances would be like temporary common stock purchases, bought at slightly under book value and redeemed at actual book value.

In the case of corporations the advance could actually take the form of a temporary stock purchase under a redemption agreement, for a certain date and as of book value at that date.

Thus the Equity Banks would be in every sense short-term commercial investment trusts in equities of current business. They would be providing, on an equity basis, short-term working capital requirements of business and speculation. They would be reducing the profits of business due solely to the "leverage" of fixed loans, but would also be reducing the excessive ownership losses of business often resulting from the same "leverage." Needless to say, small short-term personal advances could still be handled as under the present system.

Third

We now come to the requirement of *increased money supply* under certain conditions of expanding trade. For it is clear that Equity Banks would have available for advances only their own subscribed capital plus depositors' funds. Their advances would not be a lending of their own credit (as under the present system), but the equivalent of "loans for account of others," that is, of depositors, after the manner of savings banks today.

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Depositors would leave their funds with the Equity Banks for certain stated periods, and would not have the use of those funds while the Equity Banks were making advances with them. Deposits and withdrawals would both be made at prorata "book value" of the Equity Bank at the times of deposit and withdrawal respectively. Thus, owing to depositor withdrawals, there might be frequent occasions when depositors' funds would be insufficient for current business needs.

To meet this requirement there would have to be a Reserve Bank (or Banks) of Issue, similar in many respects to the present Federal Reserve Banks, but operated as a public convenience and not for profit (or loss) in the present understanding of those terms.

The Reserve Bank would have power to receive currency deposits from the Deposit Service Banks, to pay out those deposits on demand for a fee proportionately smaller than that charged customers of the Deposit Service Banks, and to issue further currency, or deposit credits redeemable in currency, to the Equity Banks *when repurchasing from those banks equities already purchased by them from their customers.*

In other words, the currency issue power (or its equivalent in redeemable deposits) would be *automatically limited* by the volume of equities requiring resale (equivalent of rediscount under present methods).

The technique of the Reserve Bank would probably be somewhat as follows:

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The Equity Bank (or Banks), having advanced the greater part of depositors' funds, would buy a given commercial equity at the usual "risk-profit" rate, and then resell the equity to the Reserve Bank at a lesser "risk-profit" rate, receiving new currency or redeemable deposit credits in exchange.

On completion of the equity transaction, the merchant would pay his agreed percentage to the Equity Bank, and the latter, in turn, would pay back the Reserve Bank its percentage. Thus, in general principle, the volume of money would be increased pending the completion of a "resold" equity transaction, and retired at its completion.

But the possibilities of profit or loss to the Reserve Bank provide this very important qualification: *namely, that profits would result in retiring more currency than was issued, and losses would result in leaving additional currency (or deposit credits) in circulation.*

This would reverse the "vicious spiral" of the present system under which increasing (and profitable) loans in good times *increase* the circulating medium and tend to *accelerate price inflation*, whereas losses and panicky curtailment of loans in bad times *reduce* the circulating medium and so tend to *accelerate price deflation*.

The operations of the Reserve Bank in relation to an Equity Bank can be illustrated from the transactions A and C already outlined above in describing Equity Bank operations.

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A. 1. The Equity Bank advances.....	\$48,500
2. Then resells the purchased equity to the Reserve Bank for 3 months, in exchange for \$48,500 in new currency (or deposit credits) <i>plus or minus</i> $\frac{1}{2}$ of the Equity Bank's eventual profit or loss. (The actual differential could, of course, be varied according to conditions.)	
3. The Equity Bank receives back from the merchant...	52,500
4. Or a gross profit of.....	\$ 4,000
5. And then clears its account with the Reserve Bank by returning the amount of the advance (\$48,500), plus $\frac{1}{2}$ the gross realized profit (\$2,000) or.....	\$50,500
6. This reduces the Equity Bank's <i>net</i> profit to.....	2,000
7. But enables the Reserve Bank to <i>decrease</i> circulation by	50,500
8. Or a <i>net</i> reduction in circulation as compared to original condition of.....	2,000
C. 1. The Equity Bank advances.....	\$48,500
2. Then resells the purchased equity to the Reserve Bank for \$48,500 in new currency (or deposits), <i>plus or minus</i> $\frac{3}{4}$ of the Equity Bank's eventual profit or loss. (The <i>raising</i> of the resale differential under conditions of greater risk reduces the <i>hazard</i> of the Equity Bank.)	
3. The Equity Bank receives back from the merchant only.....	45,000
4. Sustaining a loss of.....	\$ 3,500
5. And then clears its account with the Reserve Bank by returning the amount of the advance (\$48,500), <i>less</i> $\frac{3}{4}$ of the gross loss (or \$2,625) or.....	45,875
6. This reduces the Equity Bank's <i>net</i> loss to (\$3,500 — \$2,625)	875
7. But compels the Reserve Bank to decrease circulation by only.....	45,875
8. Leaving a <i>net</i> increase in circulation as compared with the original condition of (\$48,500 — \$45,875).....	2,625

Thus, the Reserve Bank operations would supply new funds *during the life of "resold" equity transactions*, but would produce a *net* increase or decrease in ultimate circulating medium in direct proportion

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to the preponderance of profits or losses arising from the current conditions of trade—forcing new money into circulation *when most needed* to offset declining prices or velocity, and retiring money from circulation *when least desired* because of rising prices or velocity.

This not only reverses (as noted above) the present “vicious spiral,” but also provides *positive* motives for the Equity Bankers to cooperate.

The fact that the Equity Banks can “hedge” (or reduce) their possible losses in bad times by “reselling” to the Reserve gives them a motive to “resell” as much as possible and so help to increase circulation *when that increase is needed*.

Then there is the fact that “reselling” in good times, although reducing the profit on the individual Equity Bank purchase, still increases the aggregate profits on the bank’s own funds (both capital and depositors’ funds) and thus provides a motive for helping to curtail circulation *and thus check an unhealthy boom or inflation*.

Thus, aside from the Reserve Bank’s discretionary power to raise or lower the “resale differential”—that is, the $\frac{1}{2}$ or $\frac{3}{4}$, etc., of the Equity Bank’s profit or loss—the combined operations of the Equity and Reserve Banks would achieve a wide measure of *automatic* money control, and avoid many of the purely arbitrary measures inherently demanded by the present system.

Instead of an all-powerful Federal Reserve dictatorship or a much-discussed “Supreme Court of Money,” attempting to allocate the amount of

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money (credit) required to check a boom or offset a business deflation, we would have, under a complete equity banking system, a close approach to that *automatic adjustment* which prevents too great a centralization of power and too great risks of mistaken judgment by that central power.

I realize fully that these suggestions concerning a possible nondebt banking system would require the most careful study before any attempt were made to put them into effect, whether piecemeal or otherwise. They are not offered in the spirit of a "cure-all," but merely as a subject for earnest and painstaking research by open-minded students, and in the larger perspective of an attempt to conceive or visualize just what a nondebt economy of straight capitalistic private ownership might be like.

They are suggested merely as an important part of *one possible way out of the inflation dilemma* of our present divided form of capitalism, and of the rapidly rising danger to equity capitalism evidenced in the astonishing rise in "creditor dominance" over the last two decades (see Chapter XI, "Decades of Debt").

APPENDIX B

Trustee Investments under Equity Financing



WE can group under "trustee investments" all those investments now made by savings banks, life insurance companies, and trustees (individual and corporate) of estates and also the individual investments made by or for "widows and orphans"—all those investments, in short, which seek relative stability of limited income and of principal.

Under prevailing practice, funds of this sort flow into bonds and mortgages of superior grade and minimum risk—and since they are accumulating rapidly, through death of trustors, they are slowly removing a large part of what was once enterprising equity capital and transferring it to creditor capital.

In a nondebt economy these funds would have to have a safe lodgment—and for this purpose well-secured preferred stocks (under the changed conditions) would offer practically every advantage now offered by bonds.

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This fact, however, needs further explanation. The provisions governing preferred stocks vary widely. The kind suitable for trustee investments would have to include the following provisions:

- A. The stock would represent a prior or senior claim on all net earnings up to the amount of the fixed dividend rate.
- B. This claim would be cumulative—so that any omitted dividend payment would have to be paid up in full before junior stockholders could receive any share of current earnings.
- C. The stock would also be a first claim on assets of the company up to par value of the preferred in case of sale or liquidation of the company.
- D. The preferred stockholders should have voting representation in the management of the company's business, thus insuring responsibility and also full access to current information. As long as dividends were maintained this voting power might represent a minority, but should always insure proportional representation on the board of directors. In the case of one or more defaults in agreed dividend payments (the exact number to be specified) the *majority* voting interest should automatically pass to the preferred holders and remain with them until full payment of all arrears plus current dividends.

This latter provision would give preferred holders that essential *control* which is the sole *practical* advantage today of a mortgage

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bondholder. But since this control would come about *automatically* and without legal complications, it would actually have certain marked advantages over the position of mortgage bondholders today, who, as we know from experience, suffer from unconscionable delays and legal entanglements in trying to enforce their theoretical contract rights.

The difference, however, between a bondholder's foreclosure and a preferred stockholder's assumption of control would be this: foreclosure (after all legal delays) means a *permanent* transfer of ownership, whereas assumption of control by preferred holders would be a *temporary* measure of self-protection only, and permit a return to original control as soon as justified by improved operations and earnings.

With these provisions (not all of which are included in many preferred stocks of today) and remembering that there would be no prior claim of funded debt, a preferred stock in a company with a stable earnings record would offer every *practical* advantage of today's first mortgage bonds, plus the avoidance of serious legal complications.

As to *price* stability, we already have certain examples of preferred stocks without prior funded debt whose market record challenges that of the very highest grade bond. Eastman Kodak Company 6 per cent cumulative preferred stock (whose dividend was "covered" better than sixteen times in

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the worst year of the depression!) serves to illustrate the point. The table below gives the depression "low" and the recovery "high" (up to Jan. 15, 1936) for Eastman Kodak, Preferred, compared to several highest grade long-term bonds of "trustee" caliber:

	Low	High	Per cent gain
Eastman Kodak 6% Pfd.....	99	175	+76.7
Chesapeake & Ohio Gen. 4½'s, 1992	70⅛	128⅜	+83.1
Norfolk & Western Cons. 4's, 1996..	78¾	124	+57.5
Union Pacific 1st & Ref. 4's, 2008...	68⅞	111½	+61.8

Presumably, in any slow transition to an equity finance basis, different "grades" of preferred stock would have to be used to refund or replace the "senior" and "junior" bonds in our complicated railroad and public utility capital structures. But it could not possibly be more complex than any attempt to "unscramble" priorities of bond position in a present-day reorganization. Once the new "hierarchy" of preferred stock claims was established, the procedure from then on would become automatic, and be simplicity itself compared with present-day reorganization procedure.

The same principle of a preferred claim on earnings and on assets in sale or liquidation, with automatic *control* provisions in case of dividend default, and with retirement or "amortization" provisions, would apply to the equity instrument replacing present real-estate mortgages. On income-producing

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properties, the investor would have all the protection he now enjoys *in practice* (i.e., under "assignment of rent" or "mortgagee in possession"), minus the legal complications. On owner-occupied houses, he would have the same control advantages he now enjoys (right to sell the property after a given period or to rent it to some third party), but could not deprive the owner through foreclosure of all possible future equity in the property.

In general, then, under equity financing, trustees would have excellent vehicles for "limited return" investments, with effective controls to insure sound management, and without the necessity of resort to complicated legal procedure. On the other hand, *permanent* dislocations of ownership through foreclosure would cease, and with them the chance for creditors to make eventual profits from distressed property taken over under foreclosure. This greater stability for the entire private ownership basis of capitalism should so fortify the whole economic structure as to improve the earnings stability of all investments and thus make trustee capital doubly safe.

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